THE BRICKBVILDER
AN ARCHITECTVRAL MONTHLY

VOLVME XXII JVLY 1913 NVMBER 7

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PVBLISHED MONTHLY BY
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CHURCH OF ST. THEODORE, MISTRA, LACONIA, GREECE.

Built about 1400. Bands of rubble alternating with brick and stone.

THE BRICKBVILDER

JULY, 1913

VOLVME XXII. NVMBER 7.

Some Suggestions as to the Making of Working Drawings.

THE SECOND PAPER.

BY H. VAN BUREN MAGONIGLE.

IT will interest the reader to know what methods are used in other offices than that of the writer, and I am indebted to Messrs. McKim, Mead & White and York & Sawyer, to Mr. C. B. J. Snyder, architect of the New York Board of Education, and to Mr. Oscar Wenderoth, Supervising Architect of the Treasury Department, for the loan of drawings, and statements as to their practices.

Taking these in their order, Messrs. McKim, Mead & White have loaned some of their drawings for the Municipal Office Building in New York City, a structure so large and in some respects so complicated that it was of the highest importance to systematize the process of making the drawings to avoid utter confusion.

Including shop-drawings, setting-diagrams and the like, made outside of the office, the total number of drawings for the job was between seven and eight thousand. Of these a comparatively small percentage were made in the office, but they nevertheless ran into many hundreds.

The job was divided into two contracts, one being for the structure proper and the other for the interior finish. The drawings necessary for the contract sets, that is to say, those upon which the bidders estimated and upon the basis of which the contracts were signed, were all made on cloth in ink, so that they could be reproduced by lithography for the great number of copies required. For the first contract the lithograph copies were 27 inches wide and 40 inches long. General plans and elevations were drawn at ⅛-inch scale and reduced photographically for lithographic reproduction to 1/16-inch scale. Scale details were made at ¾-inch and reduced to ⅜-inch scale and full sizes reduced one-half. For the second contract the size of these lithographed contract sets was 16 inches wide by 30¾ inches long, the reductions being similar to the above.

This method produced contract sets of a size easily handled, and the photographic reduction made it possible to indicate vastly more than would have been possible at so small a final scale. There were one hundred and twelve drawings in the first and ninety-six in the second contract set, so that compactness was essential.

The further drawings required for the execution of the work were made, some on cloth, but principally on white tracing paper, and of these sun prints were made. A width of 4 feet was established for these supplementary drawings to allow for large full sizes, but no attempt was made to keep a standard length, this dimension being regulated by the capacity of solar printing machines. After prints for the contractors and for an office set had been made, the originals were rolled on tubes about 10 inches longer than the width of the sheets, about ten drawings in each roll, and kept fresh for such further prints as might be required from them; the office set of prints was used entirely for reference (see THE BRICKBUILDER for May, 1913, first page) and were kept up to date with notes and references to correspondence where modifications were of a nature that would have required too lengthy a note.

Details of ornament were made at full size on manila detail paper and the originals sent to the modeler; but a careful tracing was first made and prints of this issued to superintendents and general and sub-contractors.

Mr. Nims, under whose direction this work was produced, agrees with the writer that the drawing from which the print is made should be made by a competent man and be an original drawing whether on cloth or tracing paper. In too many offices, I gather, the original is made by a good man on paper and traced by a junior; the contractor then gets a print from a junior's tracing; or the paper original is handed out and the junior's tracing retained to make trouble, while the contractor's draftsmen make copies of the fine original and pass them along to sub-contractors to make more trouble. A fantastic practice.

Some minor points about these drawings are of interest. The number of each drawing is marked at all of its four corners and this is said to save time and trouble in reference, and probably does in the field where drawings are not likely to be kept systematically and when wanted have to be hauled out of a heap or extracted from a roll.

Owing to the fact that there was much work below the surface, the foundations being very deep and the rapid transit subway running under the building, involving many drawings, the first floor plan was numbered 1001 to positively avoid any possible confusion, scale details beginning at 2001 and full sizes at 3001. Shop drawings are bound in the office set next to the architects' original for ready reference.

The building being of irregular shape, on all elevations of its many faces, a miniature block plan in outline was given, with the portion covered by the drawing indicated with a heavy line (see illustration).

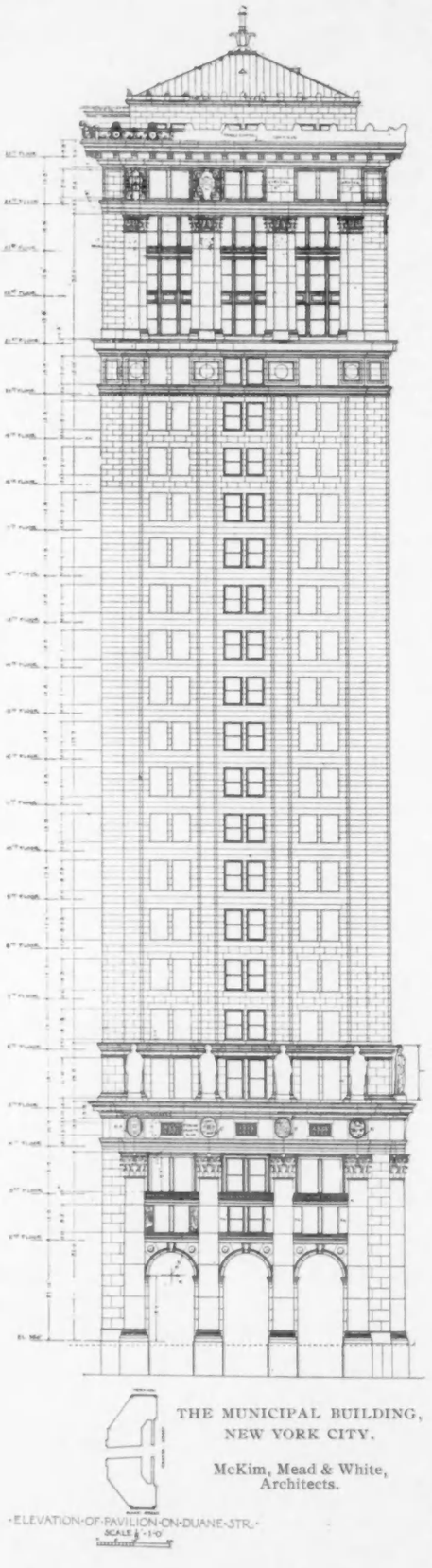
The record of drawings was kept by card index, each drawing having its own card with the number, etc., at the top. The trade for which the drawing is primarily intended is indicated by a letter and the number of copies and their destination recorded. No attempt is made to send out receipts for drawings; the experience of every one is about alike in this; contractors rarely return these receipts and it is really postage and extra work wasted at

both ends, except in the thousandth case.

My own practice as to providing copies for contractors is to issue as many prints of a drawing as there are trades represented by it, plus a copy for the contractor's office, a copy for his office at the job, and a copy for my own superintendent, which he keeps at the job; I can control the way my own man keeps his drawings and thus be reasonably sure that when I want a drawing on the job it can be found; it is useless to expect a contractor to maintain order in the shanty and I have given up trying. In the case of a one-trade drawing, such as a piece of cabinet work or carpentry, a copy is made for the contractor's office, one for his job-office, one for his mill man and one for my superintendent. For stonework the same, except that the copy for the contractors at the job is omitted, the setters always using the setting diagrams made by the contractor; but the clerk of the works gets one to keep his records complete and to check up by in case of mistakes or discrepancies. Mr. Nims used practically the same system on the Municipal Building.

The drawings which Messrs. York & Sawyer consider fairly typical of their method are also reproduced herewith. They generally use a sheet of a standard size and if this is too small for any given job they simply increase it — which is the sensible thing to do. Whenever possible, details are made on tracing paper, otherwise on cloth, and printed. They have been trying a white tracing cloth, 36 inches wide, 24 yards to the roll, at $5.45 per roll, instead of heavy tracing paper, for details; this cloth will not take ink and the details are made upon it in pencil; it will bear more handling than any tracing paper. A little figuring (in which I have not yet personally indulged) would no doubt settle, for any one interested, the point of expense involved by the use of this cloth as against a bond paper or thin white tracing paper original kept fresh for future prints and a paper or cloth print of it for an office reference set.

Originals and prints are kept flat in drawers during the progress of a job and rolled and placed in tubes when it is completed. The admirable clearness and completeness of the drawings are so obvious as to make comment unnecessary were it not that all working drawings are not so good as these; they have a way which has always excited my admiration of giving explanatory details and sections, frequently at the same scale as a plan, on the plan to which that particular section relates, and especially where some intricate or intimate relation between two floors occurs. These are sometimes quite elaborate and they are nearly always, if not quite, elucidations of parts impossible to cover in a general section, and they make a workmanlike and complete set of working drawings. General drawings are numbered from 1 to 100, scale details from 101 to 200, full sizes from 201 to 300. This would naturally vary somewhat with the size or degree of elaboration of the job.

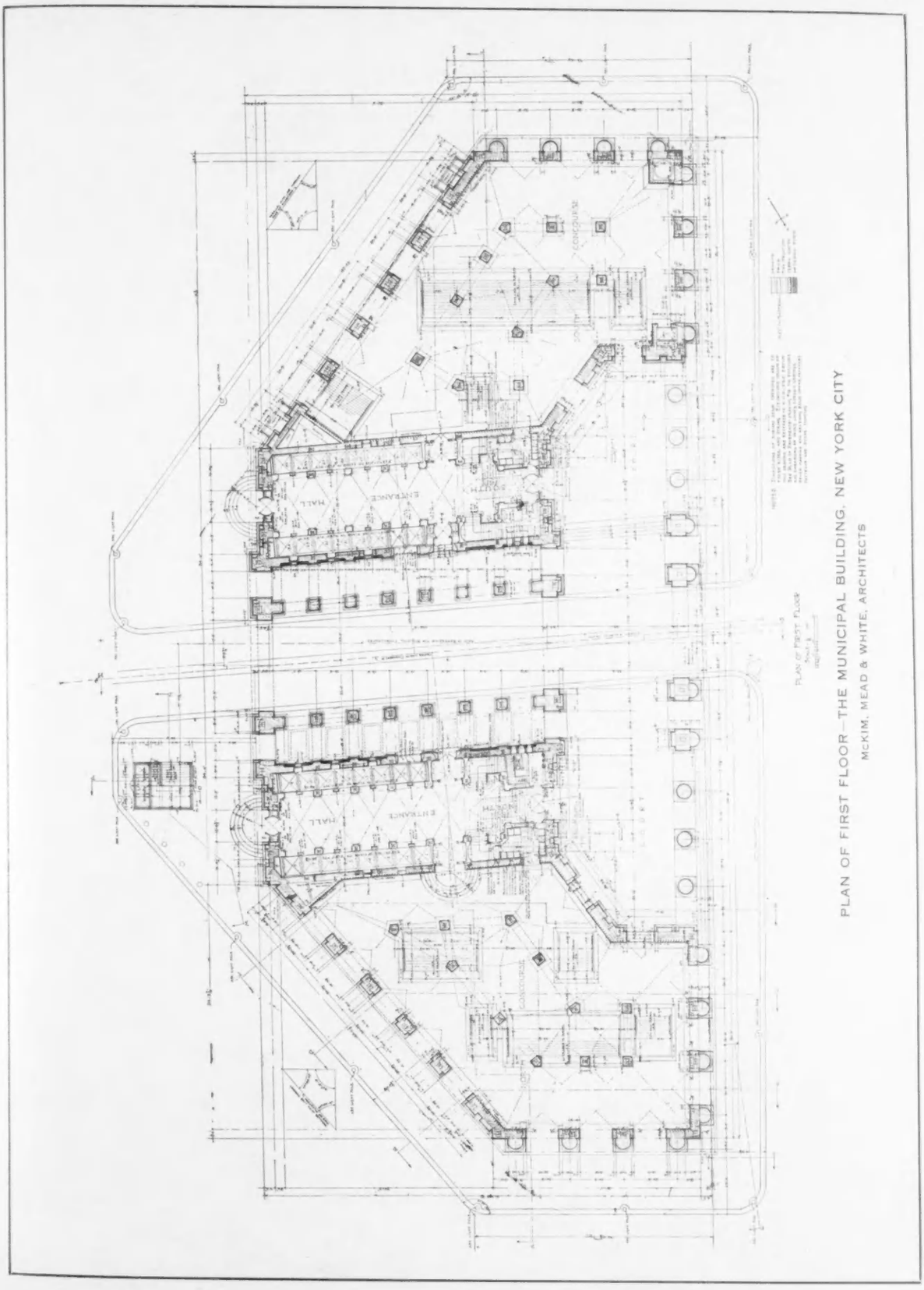


THE MUNICIPAL BUILDING, NEW YORK CITY.

McKim, Mead & White, Architects.

They still adhere to lettering firm name and titles by hand, as will be observed; perhaps they may be converted. Just here I may speak of one of the methods in vogue in my office. I spoke in the May article of having certain general lettering carefully drawn, zinc cuts made of it and this general matter printed from them in printer's ink. After these zinc cuts were made, Mr. Frank Snyder had reverse casts made of them and then cast in rubber and mounted. These rubber stamps are generally used on bond paper or thin tracing paper originals instead of printing in printer's ink, for the obvious reason that dampening the paper to properly take the ink cockles it. It is not necessary to dampen tracing cloth. We also use the name stamp, reduced to one or two smaller sizes, as rubber stamps for various office purposes. The rubber stamp man's lettering would do just as well, I suppose, but I like uniformity in such things.

It is very interesting to compare these various ways of arriving at a result in private practice with those in the office of Mr. C. B. J. Synder. (To be published in THE



PLAN OF FIRST FLOOR—THE MUNICIPAL BUILDING, NEW YORK CITY
McKIM, MEAD & WHITE, ARCHITECTS

BRICKBUILDER for August.) Naturally the problems in private practice vary so widely as a rule that standardization is difficult except in minor particulars. But Mr. Snyder is building millions of dollars' worth of schools every year and has standardized much of the work. He has standardized certain types of plans, and these are traced over and over for new buildings of the type with such minor changes as may be advisable. The elevations and some special features are changed or entirely re-studied. But when it comes to details of staircases, details of construction and equipment and the like, these are thoroughly standardized, given an identifying signature such as A2 or B6, and are referred to as such on the general plan at the point where such standard detail applies. It is, then, when a new school of a certain type is to be built, necessary only to make such minor changes in the general type plan as are necessary, re-study the elevations, alter sections to fit the elevations, make new details of the exterior, and for all the rest merely bind into the set copies of the standard details A2, B6, etc. These include staircases, handrails, standing trim, blackboards, etc.

This is of suggestive value for the private practitioner. Standardization cannot be carried so far; but there are very many things such as window frames, butler's pantry details, and service trim that can be standardized. It does seem silly to start fresh on such things for every new job. If we once work out the essential details of a butler's pantry satisfactorily, there is no reason for not doing precisely the same thing in another job; the drawing room is another matter. I tried it once some time ago, but somehow it fell into disuse and I am strongly inclined to revive it.

In Mr. Snyder's Department, blue prints are made in the office and the width of the blue print paper controls the widths of sheets; the extreme length is 6 feet, the largest print the office can make.

Sheets for general plans, elevations, and sections are made uniform in size, but the detail sheets are not necessarily uniform in size with them. Eighth scale general drawings are the rule, with ¾ inch for scale details.

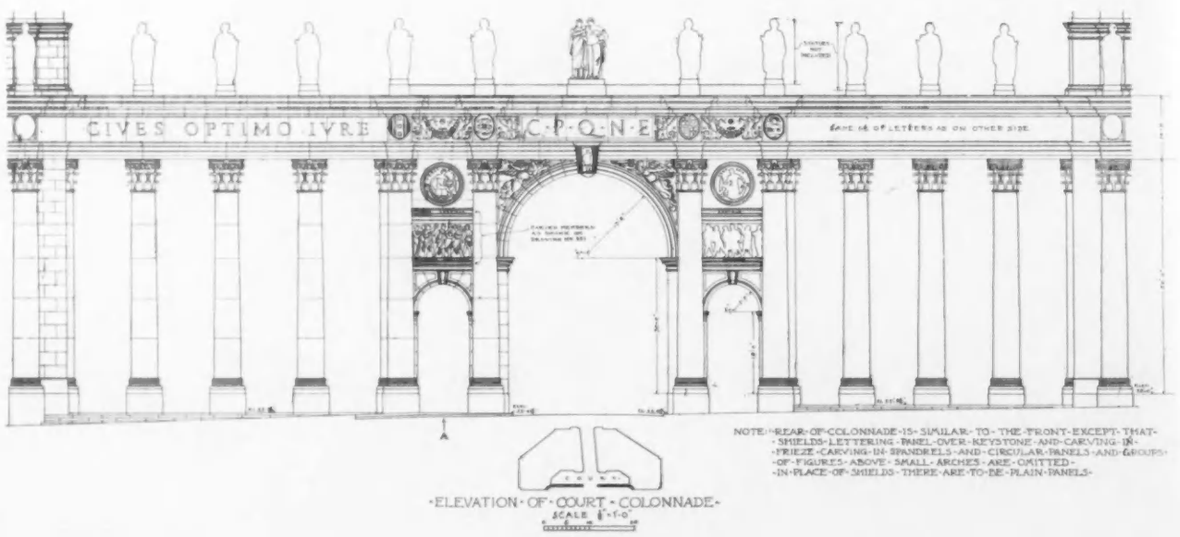
The issue book is a large double page affair giving date, number of prints, number of drawings received, etc., and is signed by the contractor when he gets his copies.

The figures as to cost of production are impressive, although it is only fair to say that such low cost can only be expected where a high degree of standardization, as in a constant procession of school buildings, is possible.

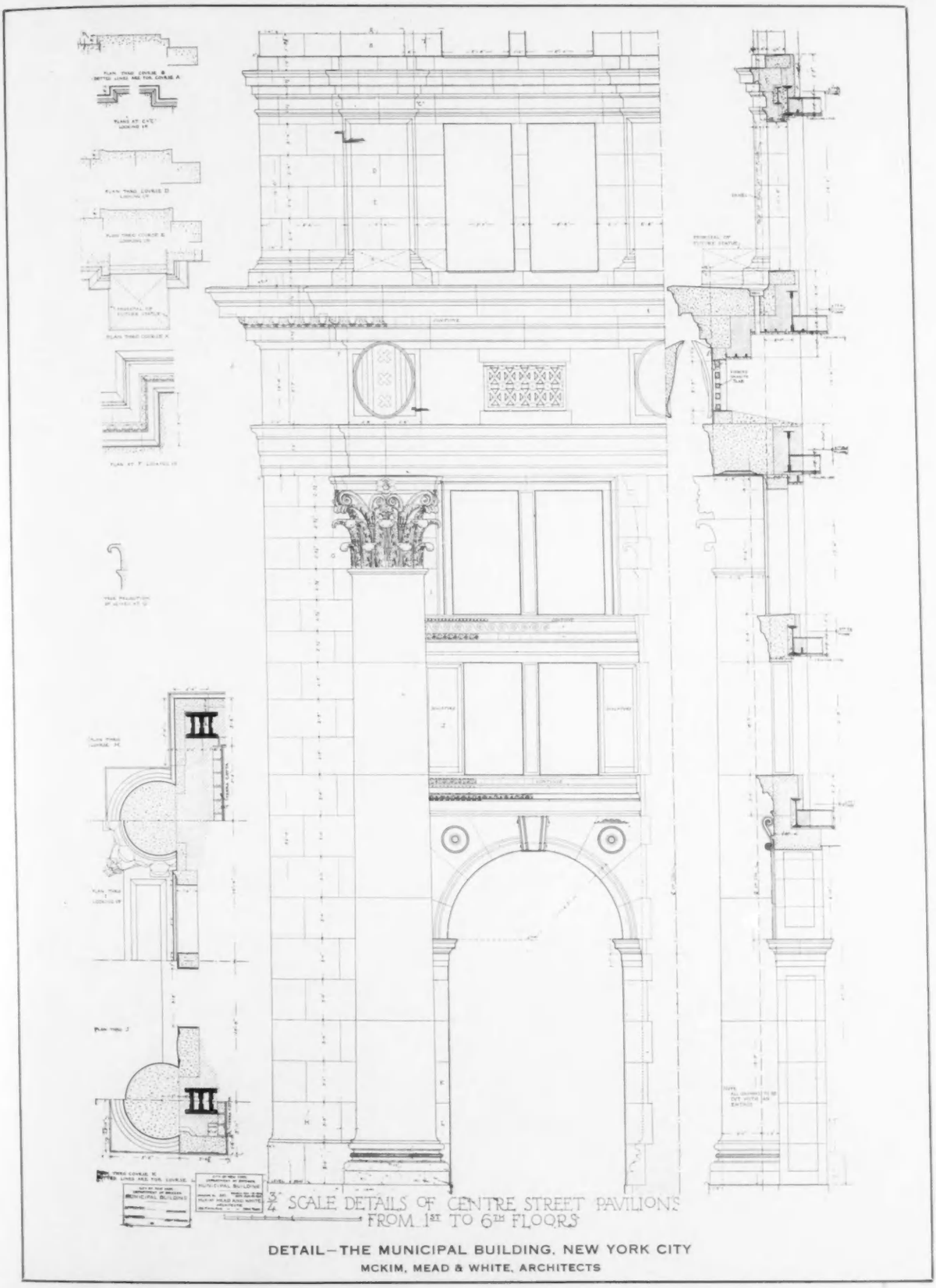
But we are all interested in the eternal question of cost of production, and it would seem reasonable for the profession to adopt methods of manufacture that will bring down the cost of production without turning the offices into factories.

In most architects the artistic temperament predominates and it is an uphill fight against that rather disorderly quality. Most of us want to do decent work with a personal touch; how to do that and have something left over to meet our personal obligations is one of our biggest problems. But if we are artists first, we must, in these ultimate days, be also business men. We have grave responsibilities in the expenditure, to the best advantage, of our clients' money, the safeguarding of their interests in a hundred ways, and if we are too artistic to be business-like we can hardly hope to retain the respect and confidence of the business public that builds. It seems to me that a little simple systematization of our work will help us to serve it better.

The series of working drawings will be completed in the August issue with reproductions of several interesting drawings from the offices of the Supervising Architect of the Treasury Department and C. B. J. Snyder.

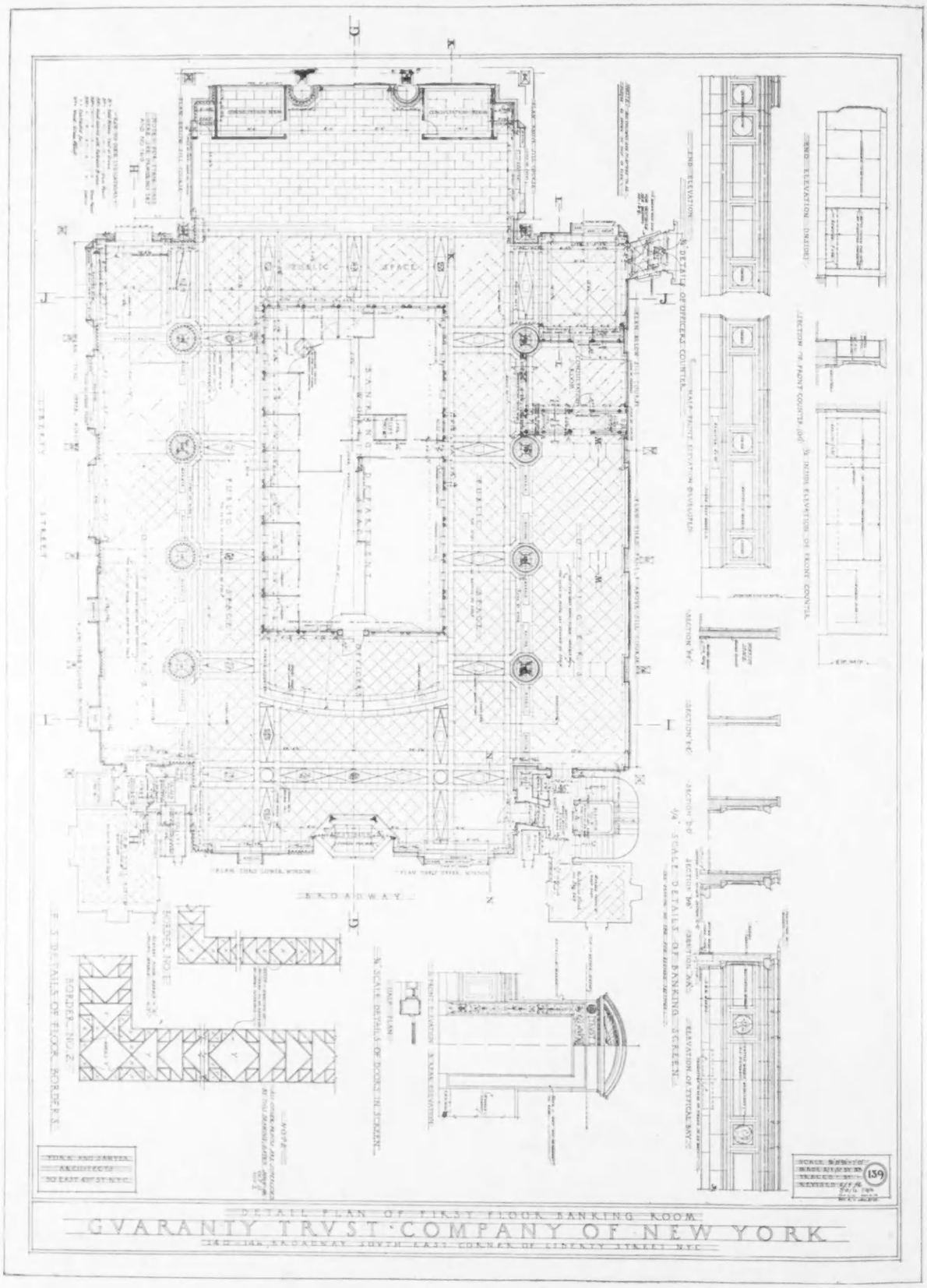

CIVES OPTIMO IVRE
NOTE: REAR OF COLONNADE IS SIMILAR TO THE FRONT EXCEPT THAT SHIELDS LETTERING PANEL OVER KEYSTONE AND CARVING IN FRIEZE CARVING IN PENDENTS AND CIRCULAR PANELS AND GROUPS OF FIGURES ABOVE SMALL ARCHES ARE OMITTED IN PLACE OF SHIELDS THERE ARE TO BE PLAIN PANELS
ELEVATION OF COURT COLONNADE
SCALE 1/8"=1'-0"

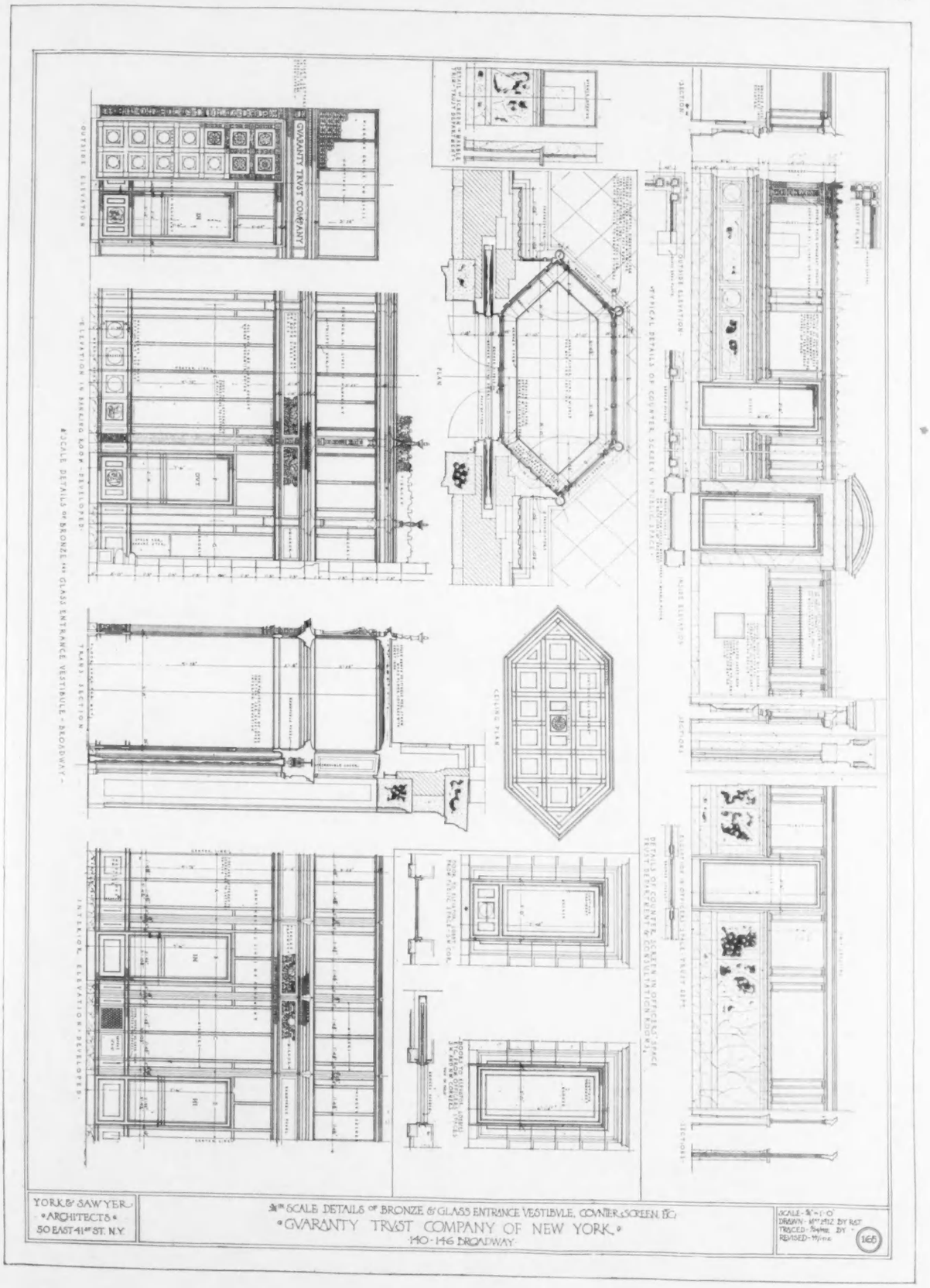
THE MUNICIPAL BUILDING, NEW YORK CITY.
McKim, Mead & White, Architects.

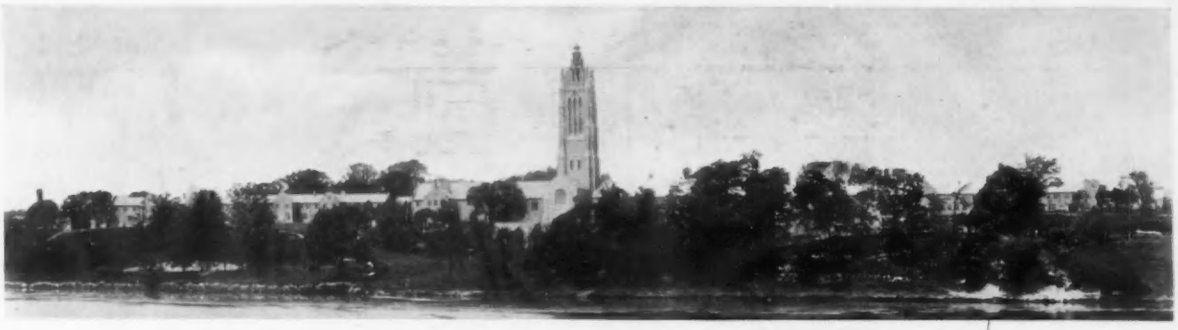


DETAIL—THE MUNICIPAL BUILDING, NEW YORK CITY

MCKIM, MEAD & WHITE, ARCHITECTS


BROADWAY
DETAIL PLAN OF FIRST FLOOR BANKING ROOM.
GUARANTY TRUST COMPANY OF NEW YORK


GUARANTY TRUST CO. OF N.Y.
OUTSIDE ELEVATION
ELEVATION IN BANKING ROOM - DEVELOPED
PLAN
TRANS. SECTION
CEILING PLAN
INTERIOR ELEVATION - DEVELOPED
YORK & SAWYER
ARCHITECTS
50 EAST 41st ST. N.Y.
3/4" SCALE DETAILS OF BRONZE & GLASS ENTRANCE VESTIBULE, COUNTER & SCREEN ETC.
GUARANTY TRUST COMPANY OF NEW YORK
140-146 BROADWAY
SCALE - 3/4" = 1'-0"
DRAWN - MITCHELL BY RST
TRACED - BYRNE BY
REVISED - Wynne
165



The Perkins Institution and Massachusetts School for the Blind at Watertown, Massachusetts.

R. Clipston Sturgis, Architect.

THE problem presented to the architect was a complete group of new buildings for the two departments of the Institution previously housed in two separate groups, one in South Boston and one in Jamaica Plain. There were three main divisions of the problem: first, the upper school; second, the lower school; and third, the buildings common to both. The upper school required accommodation for about one hundred and sixty pupils demanding three separate units: first, the school and administration building; second, the living quarters for the girls; and third, the living quarters for the boys. The lower school required accommodation for about one hundred and twenty children, with the living quarters and school rooms in close relation to each other and with two general meeting rooms in addition. The buildings to serve both these branches of the Institution were to consist of a Director's House, a small hospital and dispensary building, and the power plant.

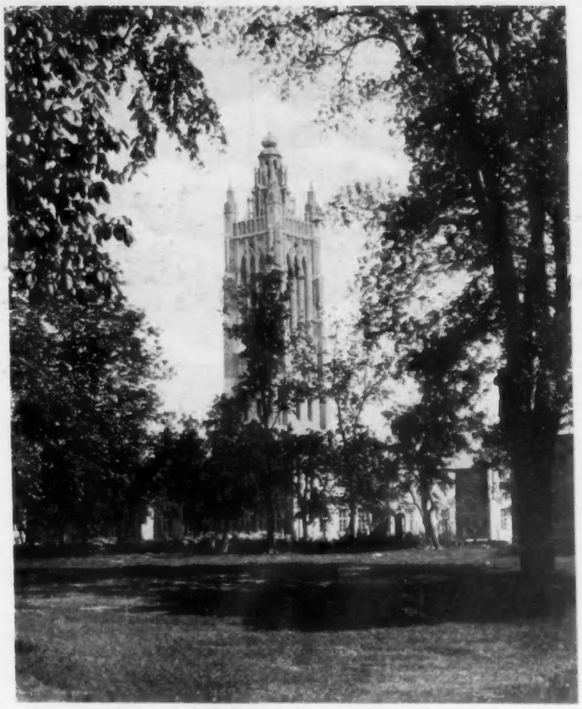
GROUP PLAN.

The principle governing the housing of the children was a very important factor in determining the scheme of the plan. In other institutions of the kind, as for instance at Overbrook, Pa., the dormitory plan was adopted and there the school departments as well as the living quarters were grouped under a single roof. Here the cottage system was adopted as the underlying principle and this involved subdividing the children into relatively small groups, giving to each group an independent, complete cottage with its bedrooms, living rooms, dining room, and service, and tending to create as much as possible the quality of the home. In the upper school there are four cottages for the girls and four cottages for the boys, each containing about twenty pupils with a matron, three or four teachers, and the necessary servants, the latter reduced to a minimum since the children are called upon to do a considerable amount of the daily work for themselves, such as keeping their rooms in order, helping at the table and in the serving rooms, and in keeping their cottage clean. The lower school consists of four cottages with about thirty younger children in each cottage, with their attendant teachers and a larger complement of servants since the younger children do less of the housework. In the upper school these cottages are entirely separated from the school building, while, as noted above, in the lower school the living quarters are more closely allied to the school rooms.

Another fundamental principle underlying the plan was the necessity for the segregation of the sexes. In the lower school the two cottages for the boys and the two for girls are practically independent. In the upper school, the girls and boys each have direct access from their cottages to their respective portions of the school building. Further than this, within the school building itself, the school rooms for the boys and girls are kept completely separated, and the common rooms, such as the museum, the main assembly room, the smaller morning assembly room, and the swimming pool and gymnasium, so located as to give access for the boys and girls without any crossing of the line of approach. Separate playgrounds have been provided for the boys and the girls adjacent to their respective cottages in both the upper and the lower schools; and again the Hospital with its dispensary is so located as to give independent approaches for the boys and girls to their two entrances to the dispensary, as well as independent entrances to the four isolation wards.

The Director's House had of necessity to be in close contact with the various units, and still give him some

degree of isolation for his family life. The power house, housing all the domestic services for the complete Institution so far as main supplies are concerned, had to be so located as to serve readily, through a tunnel system, all the independent cottages with their daily needs, and also fulfil the requirements of the domestic engineering services. The power house contains a refrigerating plant and cold storage rooms; opportunity for the receipt, storage, and distribution of all supplies; boiler and engine rooms, carpenter shop, laundry rooms, bake shop, and living accommodations for about fourteen men. It also houses the "Howe Memorial" printing plant, which serves not alone this Institution, but other institutions throughout the country, and indeed the world to a certain extent as well.



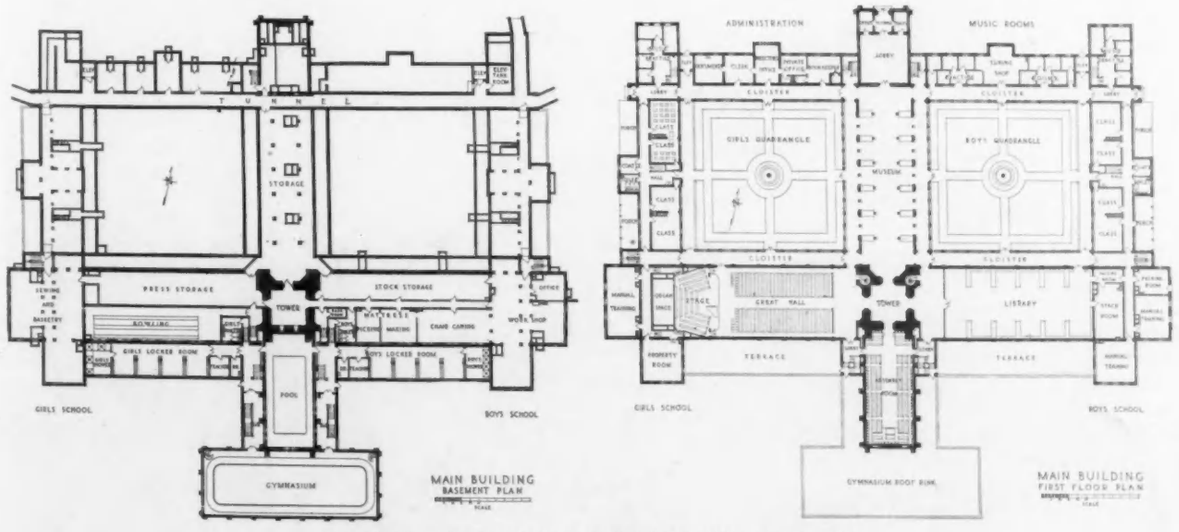
THE CENTRAL TOWER.

The site of the Institution comprises a forty-acre lot in Watertown, bordering on the Charles River. It is very largely level, sloping off towards the river, with steep banks and terraces which swing back to form a small valley near the middle of the boundary line. An existing driveway, bordered by splendid trees for half its length, has been used as an approach from the west. Along the west boundary a fine row of lindens screen the lot from the adjacent dwellings, and there are as well several small orchards. An attractive feature is a small natural pond near the middle of the property.

The general plot plan of the group of buildings as developed shows how the upper school building and cottages form a long group parallel to the river frontage, with the existing driveway leading directly to the main entrance of the school and administration building. The Director's House was placed at one end of the group of girls' cottages, and so that the Institutional buildings would not interrupt the view of the river. Beyond this, in the southwest corner of the lot, is the power house. A service tunnel extends under the long axis of this group of buildings, with a branch tunnel from the end of the Girls' Close northward to the Kindergarten or lower school building.

The Hospital occupies a position on the curve of the driveway near the main school building, and is fairly centrally located in reference to the Boys' Close, the Girls' Close, and the Kindergarten.

The cottages for the boys and the girls of the upper school developed into two groups which, for purposes of illustration, might be compared to the Vicars' Close at Wells in England. On each side of a central walk two cottages, stretched into a long building, run more or less east and west, admitting of southern exposure for all the living and sleeping rooms, with the toilets and wash rooms, stairs and corridors on the northerly side. Each pair of cottages on each side of the Close meets in a party wall,



BASEMENT AND FIRST FLOOR PLANS OF MAIN BUILDING.

VIEW TOWARD TOWER FROM GIRLS' QUADRANGLE

VIEW TOWARD CLASS ROOMS FROM BOYS' QUADRANGLE

PERKINS INSTITUTION AND MASSACHUSETTS SCHOOL FOR THE BLIND, WATERTOWN, MASS.

R. CLIPSTON STURGIS, ARCHITECT

being exactly the reverse of each other, and the service portions meeting at this point simplify the service from the underground tunnel.

The school building is between these two cottage groups with the entrances for the boys and girls directly opposite the ends of their respective Closes. The buildings being developed around two courtyards gave opportunity for the girls' school rooms, music practice rooms and manual training rooms on the north and west sides of the girls' courtyard, the similar rooms for the boys being to the north and east of their courtyard. On the central cross axis, between the two courtyards, lay the museum and the other rooms, used by all the students. The small valley referred to above gave opportunity for extending the swimming pool and gymnasium, with their attendant dressing rooms, beneath the southern exposure of the main building as indicated on the block plans of this building.

ENTRANCE TO KINDERGARTEN FROM COURT.

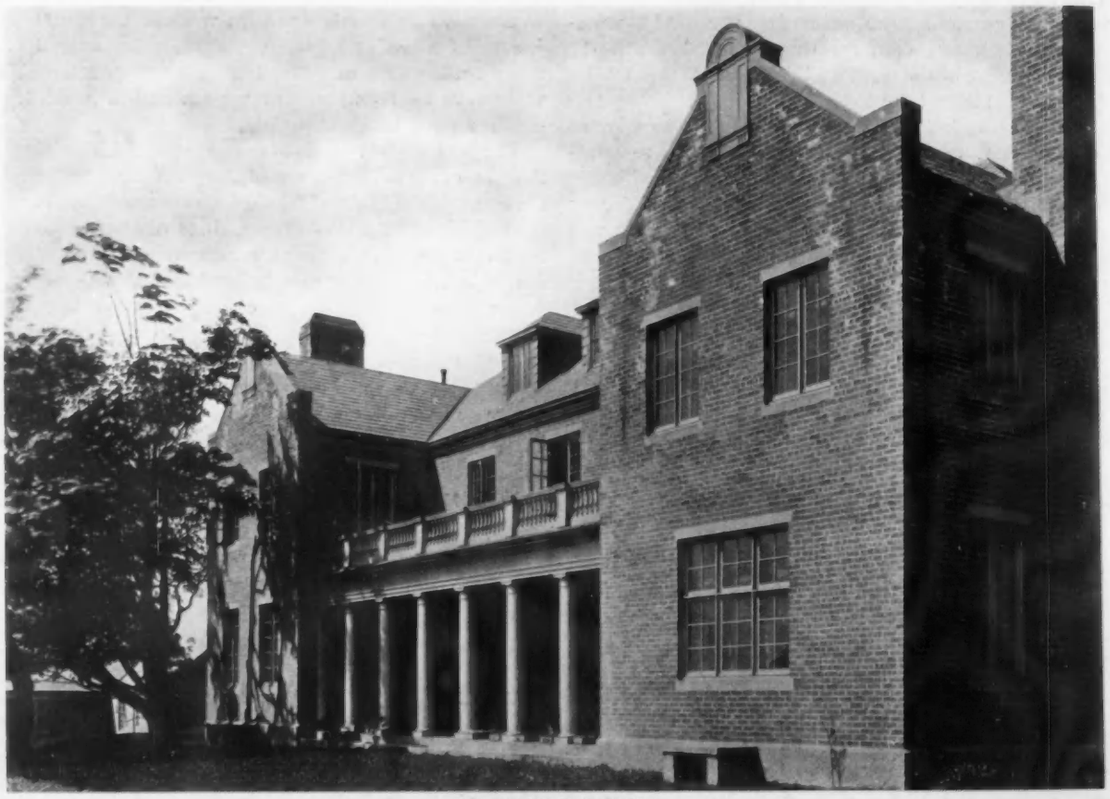
In this building it is of interest to note the location of the class rooms, opening on to the courtyards to minimize the noise from the trains across the river; with the music rooms along the north sides of the courtyards facing outward and shielded from the courtyards in both stories by corridors, so that they likewise form no annoyance to the class-room work.

Various minor points throughout the plan were the result of the main underlying condition, the blindness of the children. Straight corridors and right-angle approaches are maintained throughout to facilitate the blind in finding their way; stairs lead from the sides of corridors rather than from the end, to avoid the danger of approaching them without knowledge; the top of the gymnasium forms a roller skating rink, and indented rulings in the cement surface, a few feet in from the edge, serve as a warning to the skaters. The running track, on the gymnasium balcony, has a continuous brass hand rail bracketed from the gallery railing, which serves to guide the runners safely. The walls of the swimming pool and the level of the water within are raised several feet above the surrounding passages, preventing accidental stumbling into the pool. In the Closes the central paths are abnormally crowned, as also in all the smaller brick paths, assisting the blind in maintaining an accurate sense of direction of the paths. Special raised-pattern tile are used in connection with the concrete work of the museum and low relief carved blocks of various familiar animal forms are placed where dado caps meet door panels. These will serve as points of amusement and interest to the children upon better acquaintance.

The Director's House is of wood frame within brick walls. All the other buildings are of fireproof construction with the exception of the roof frame which is wood, but enclosed by the wire lath and plaster ceilings of the upper floors. Up to the level of the first floor concrete is used throughout, the exterior surfaces being brushed as soon as the forms were taken down in order to remove the surface cement and bring the aggregate to the surface for color and texture. Above this line brick is used with a sparing amount of stonework which, however, is increased towards the main axis of the main building, culminating in the tower which is entirely of concrete with stone trimmings.

THE BOYS' CLOSE.

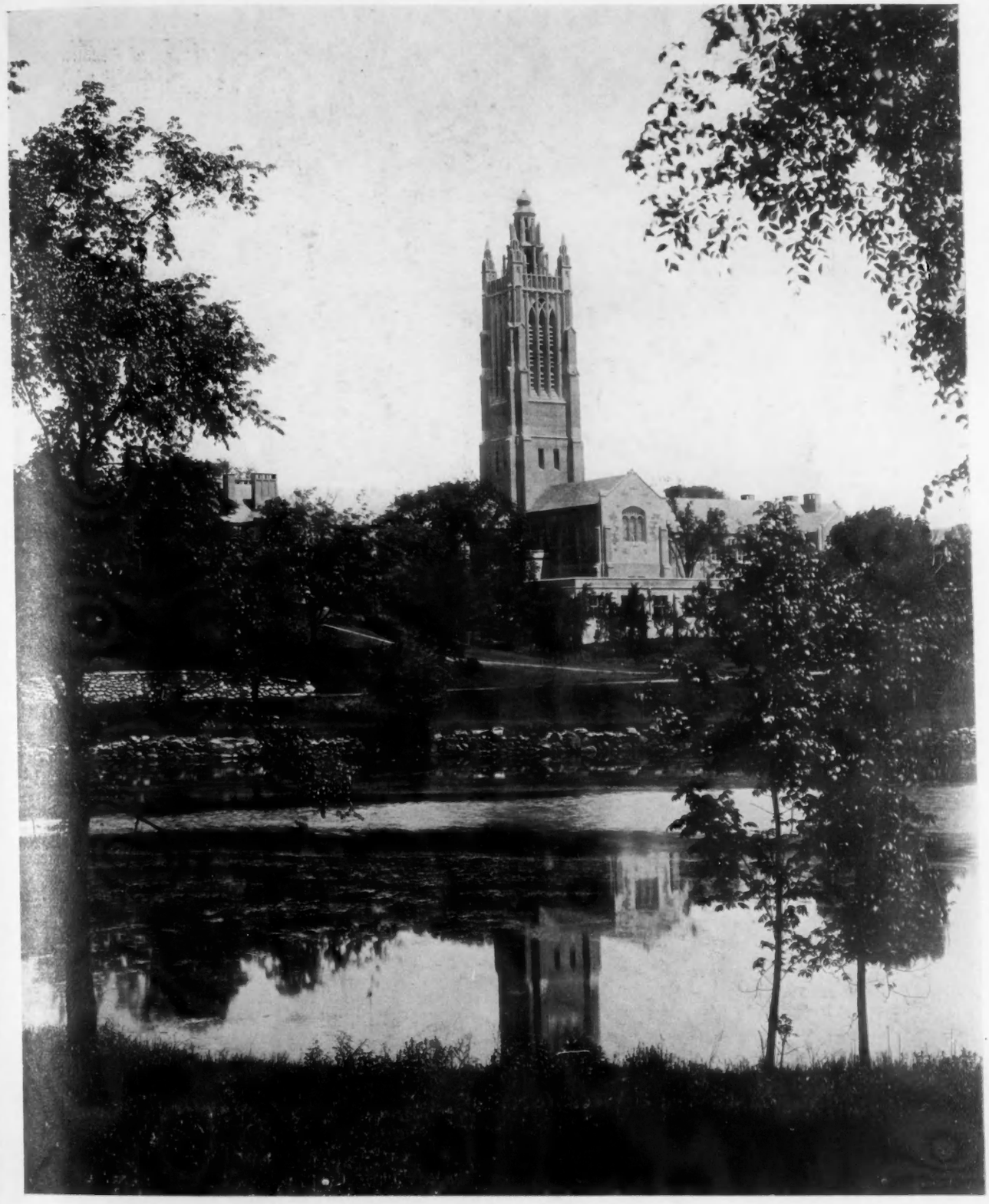
THE HOSPITAL



THE DIRECTOR'S HOUSE

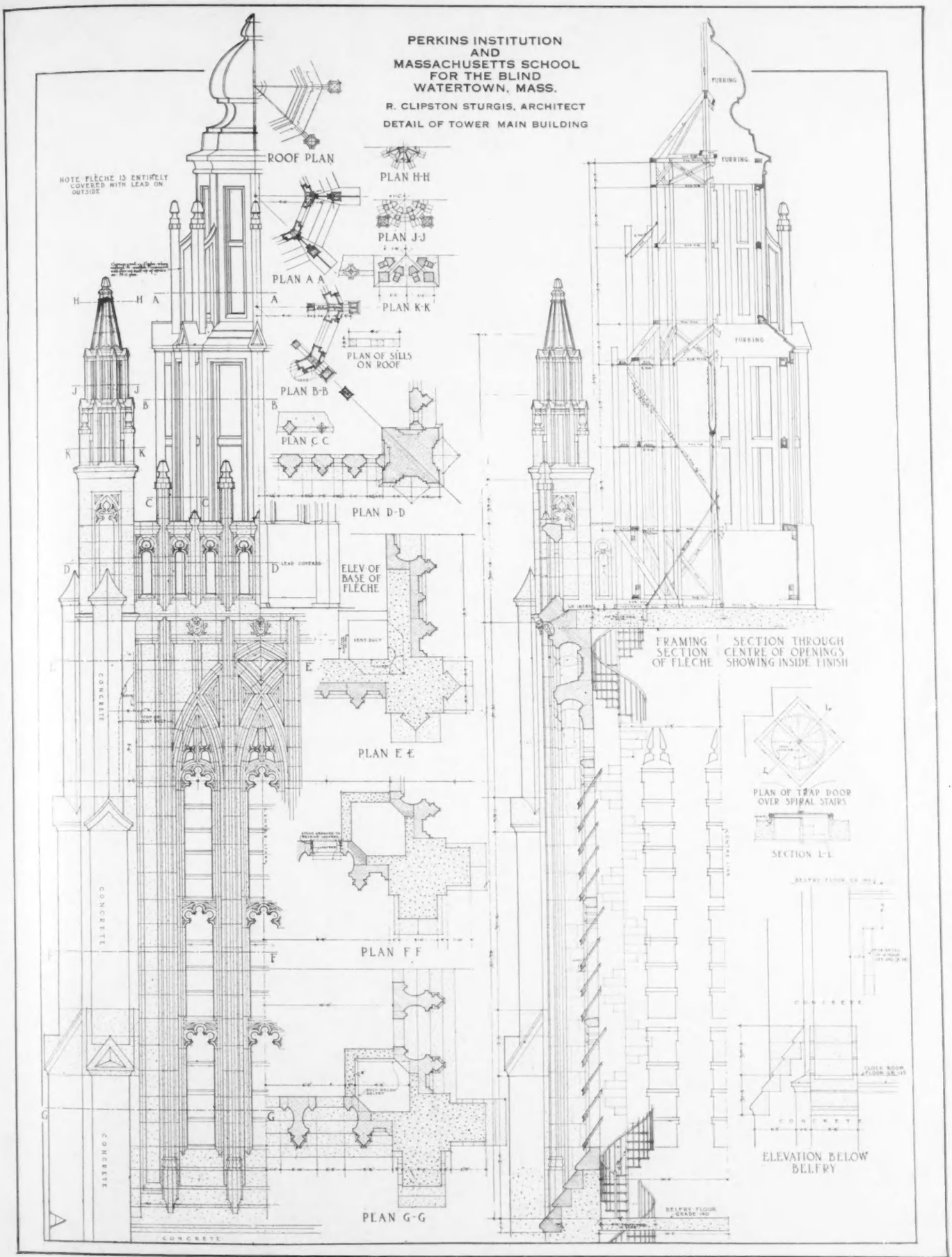
PERKINS INSTITUTION AND MASSACHUSETTS SCHOOL FOR THE BLIND, WATERTOWN, MASS.

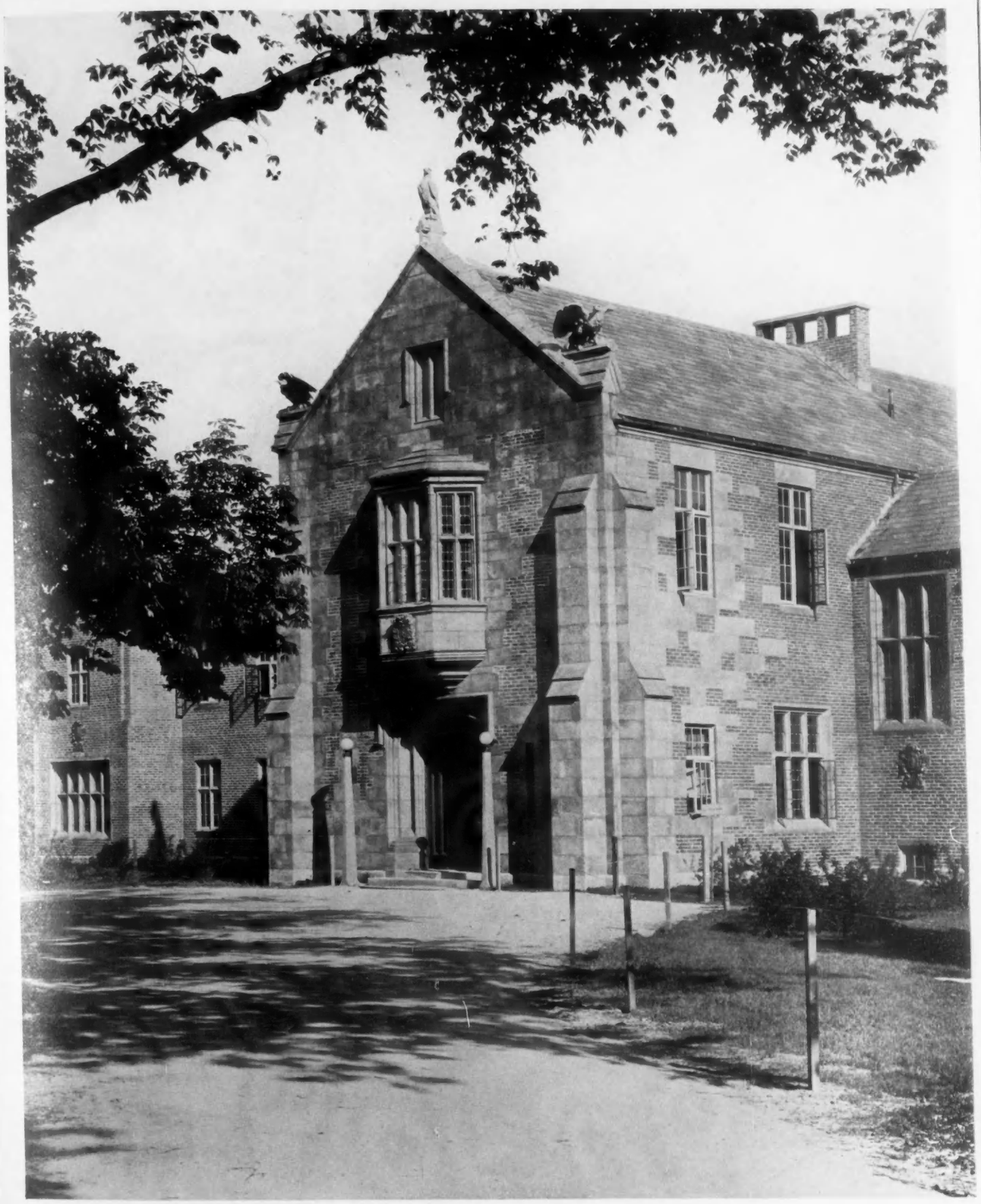
R. CLIPSTON STURGIS, ARCHITECT



TOWER, MAIN BUILDING

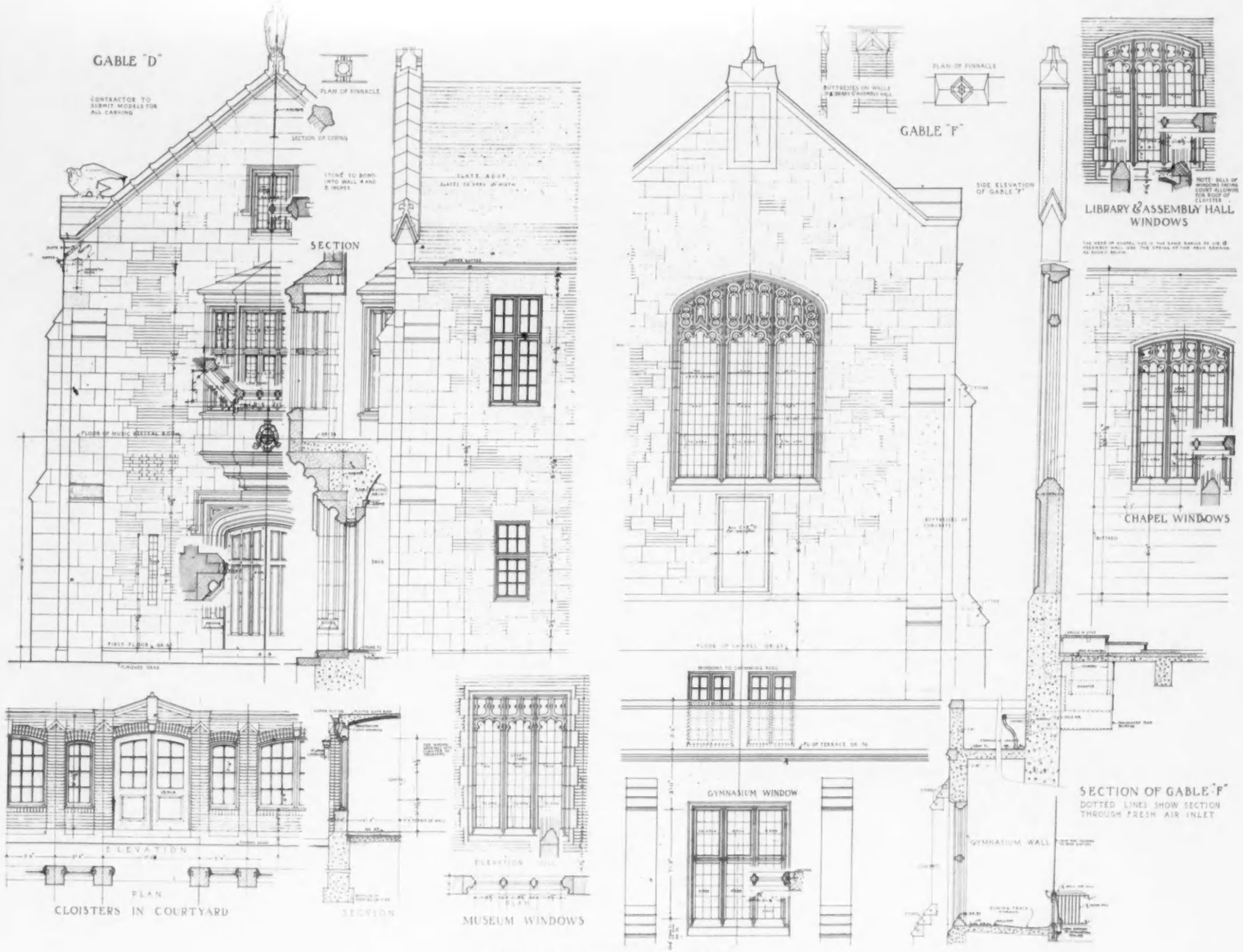
PERKINS INSTITUTION AND MASSACHUSETTS SCHOOL FOR THE BLIND, WATERTOWN, MASS.
R. CLIPSTON STURGIS, ARCHITECT


PERKINS INSTITUTION
AND
MASSACHUSETTS SCHOOL
FOR THE BLIND
WATERTOWN, MASS.
R. CLIPSTON STURGIS, ARCHITECT
DETAIL OF TOWER MAIN BUILDING
NOTE FLÈCHE IS ENTIRELY COVERED WITH LEAD ON OUTSIDE
ROOF PLAN
PLAN H-H
PLAN J-J
PLAN A-A
PLAN K-K
PLAN OF SILLS ON ROOF
PLAN B-B
PLAN C-C
PLAN D-D
ELEV OF BASE OF FLÈCHE
PLAN E-E
PLAN F-F
PLAN G-G
CONCRETE
FURRING
FRAMING SECTION OF FLÈCHE
SECTION THROUGH CENTRE OF OPENINGS SHOWING INSIDE FINISH
PLAN OF TRAP DOOR OVER SPIRAL STAIRS
SECTION L-L
ELEVATION BELOW BELFRY



DETAIL OF MAIN BUILDING

PERKINS INSTITUTION AND MASSACHUSETTS SCHOOL FOR THE BLIND, WATERTOWN, MASS.
R. CLIPSTON STURGIS, ARCHITECT



MAIN BUILDING—EXTERIOR DETAILS

PERKINS INSTITUTION AND MASSACHUSETTS SCHOOL FOR THE BLIND, WATERTOWN, MASS.

R. CLIPSTON STURGIS, ARCHITECT

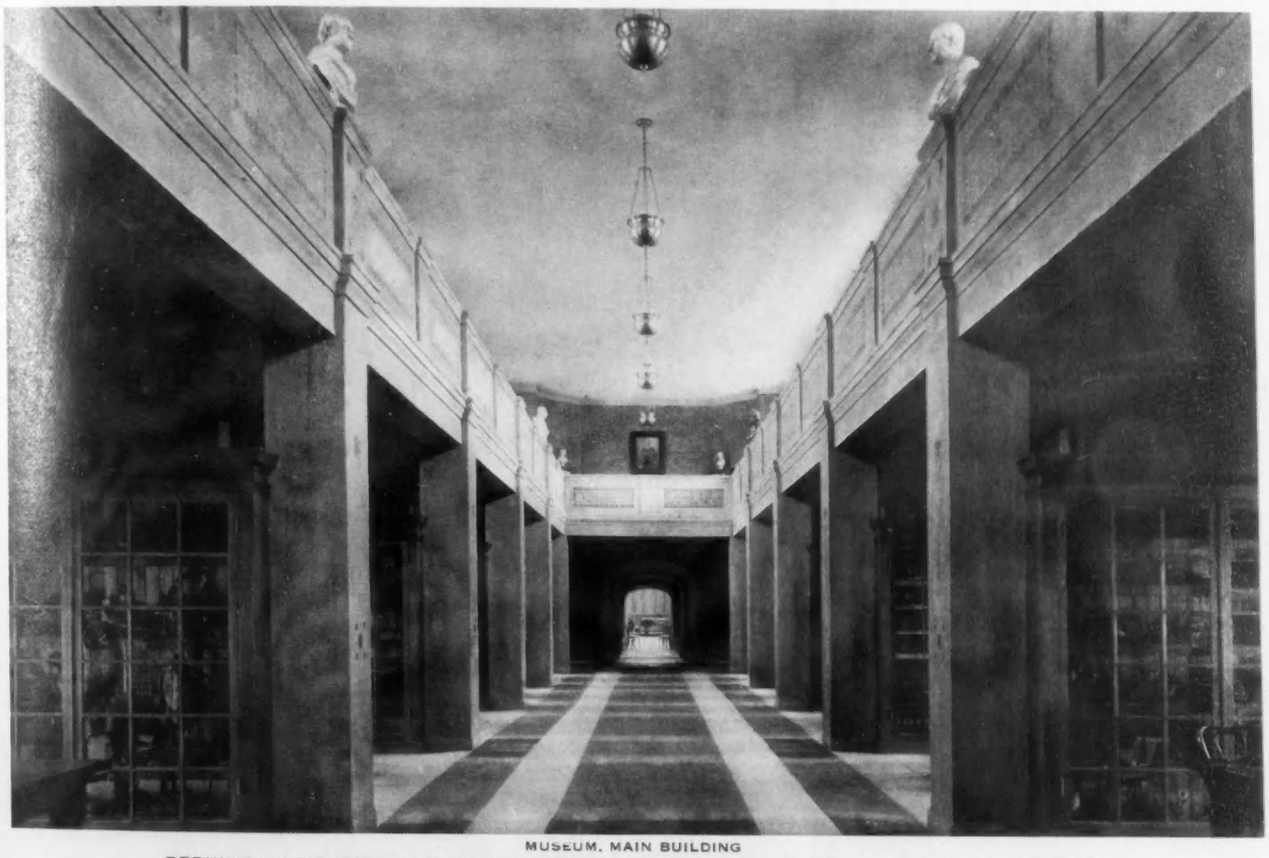
CORNER OF MAIN BUILDING

EXTERIOR OF GYMNASIUM AND ASSEMBLY ROOM, MAIN BUILDING

PERKINS INSTITUTION AND MASSACHUSETTS SCHOOL FOR THE BLIND, WATERTOWN, MASS.

R. CLIPSTON STURGIS, ARCHITECT

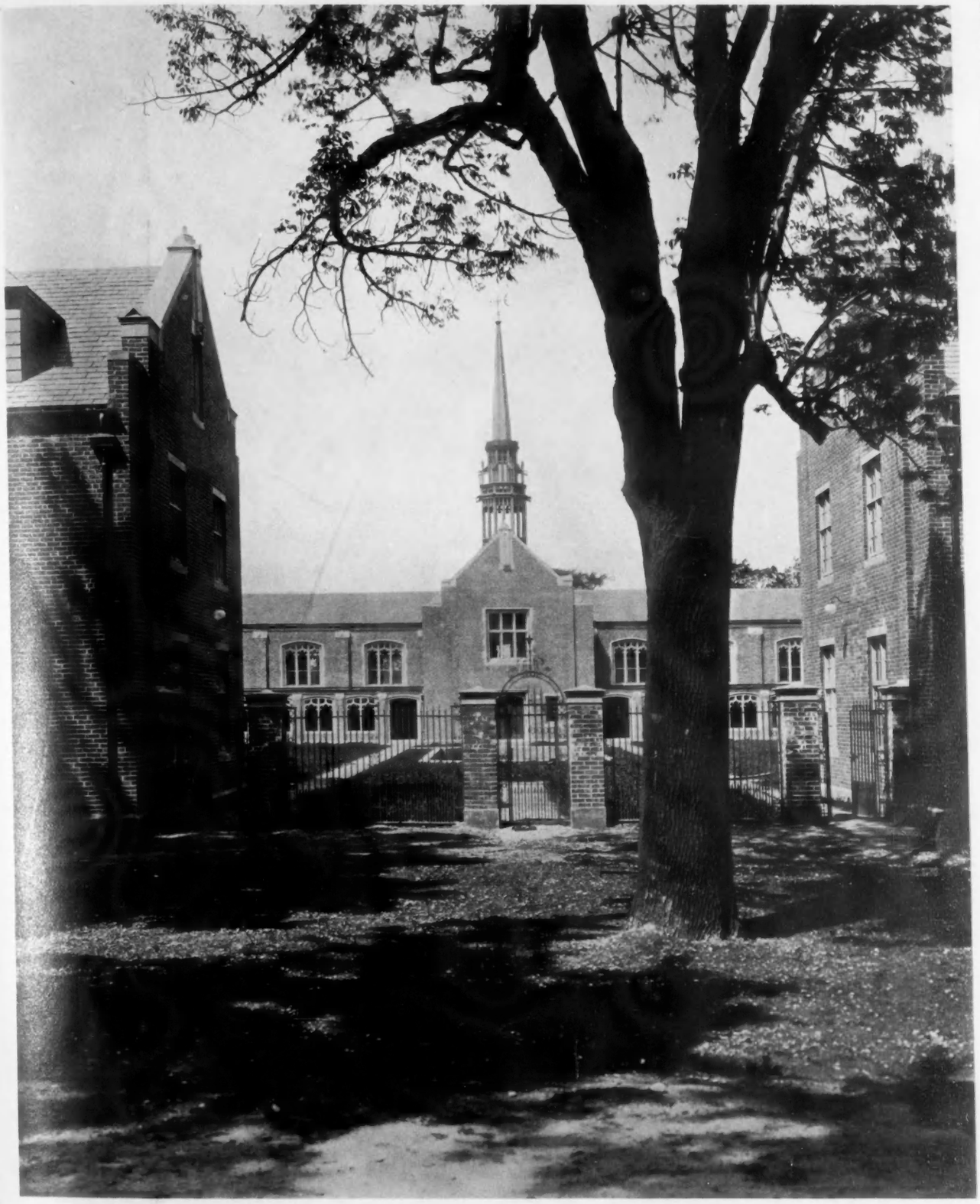
ASSEMBLY ROOM, MAIN BUILDING



MUSEUM, MAIN BUILDING

PERKINS INSTITUTION AND MASSACHUSETTS SCHOOL FOR THE BLIND, WATERTOWN, MASS.

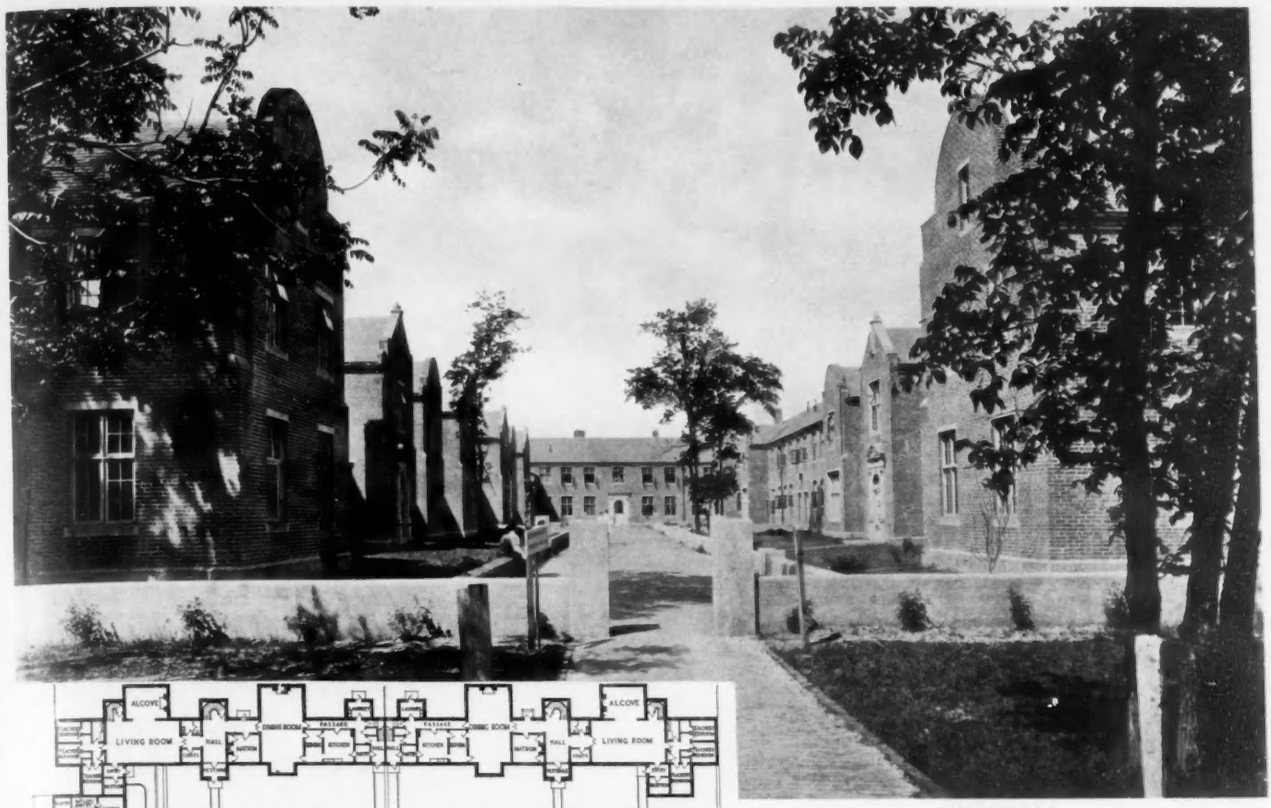
R. CLIPSTON STURGIS, ARCHITECT



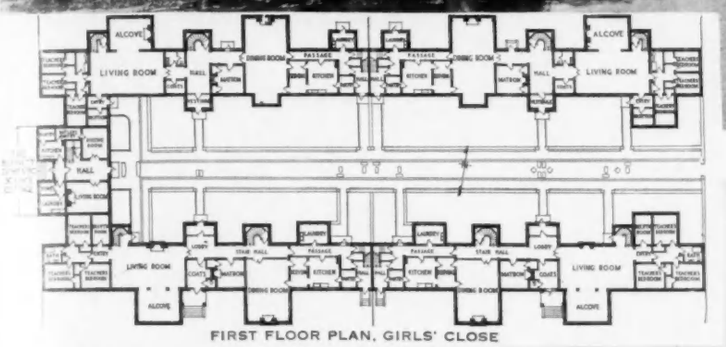
DETAIL OF KINDERGARTEN BUILDING

U of M

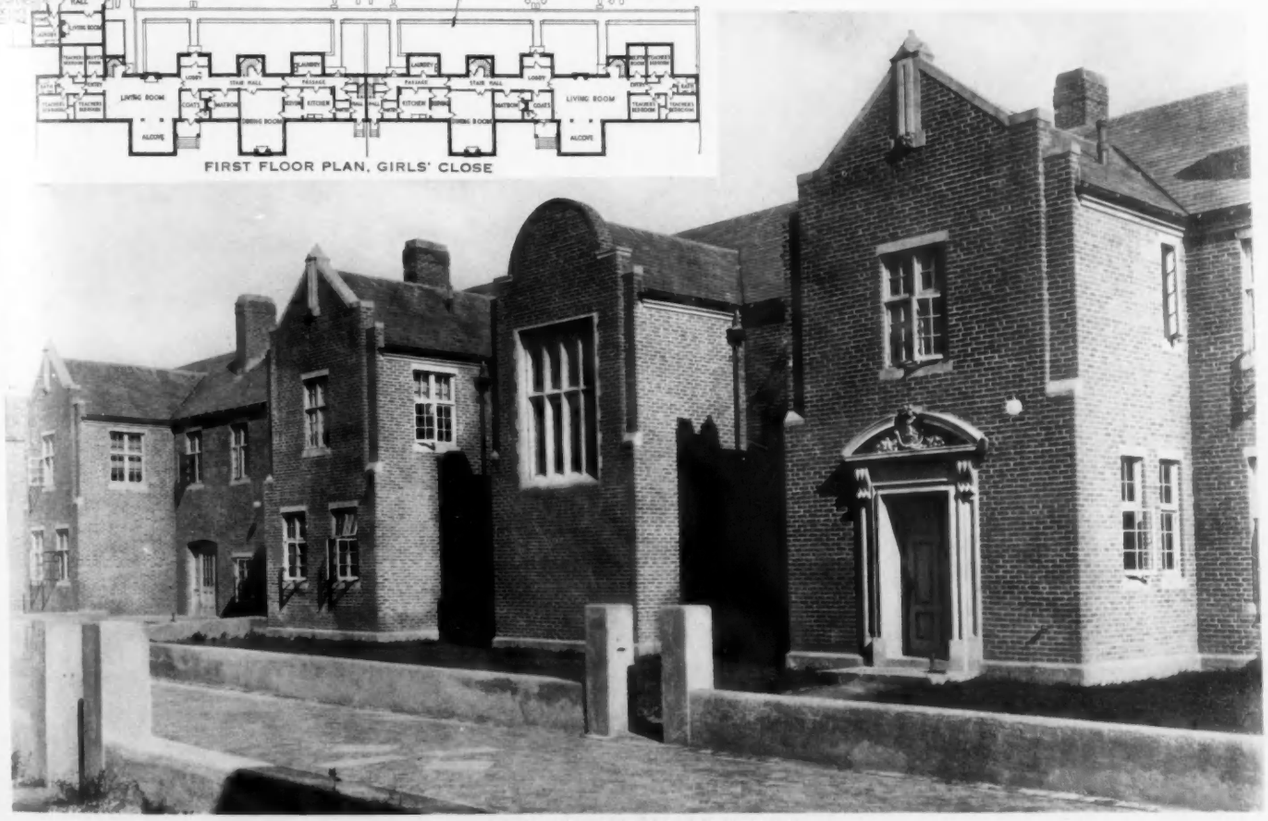
PERKINS INSTITUTION AND MASSACHUSETTS SCHOOL FOR THE BLIND. WATERTOWN, MASS.
R. CLIPSTON STURGIS, ARCHITECT



GIRLS' CLOSE



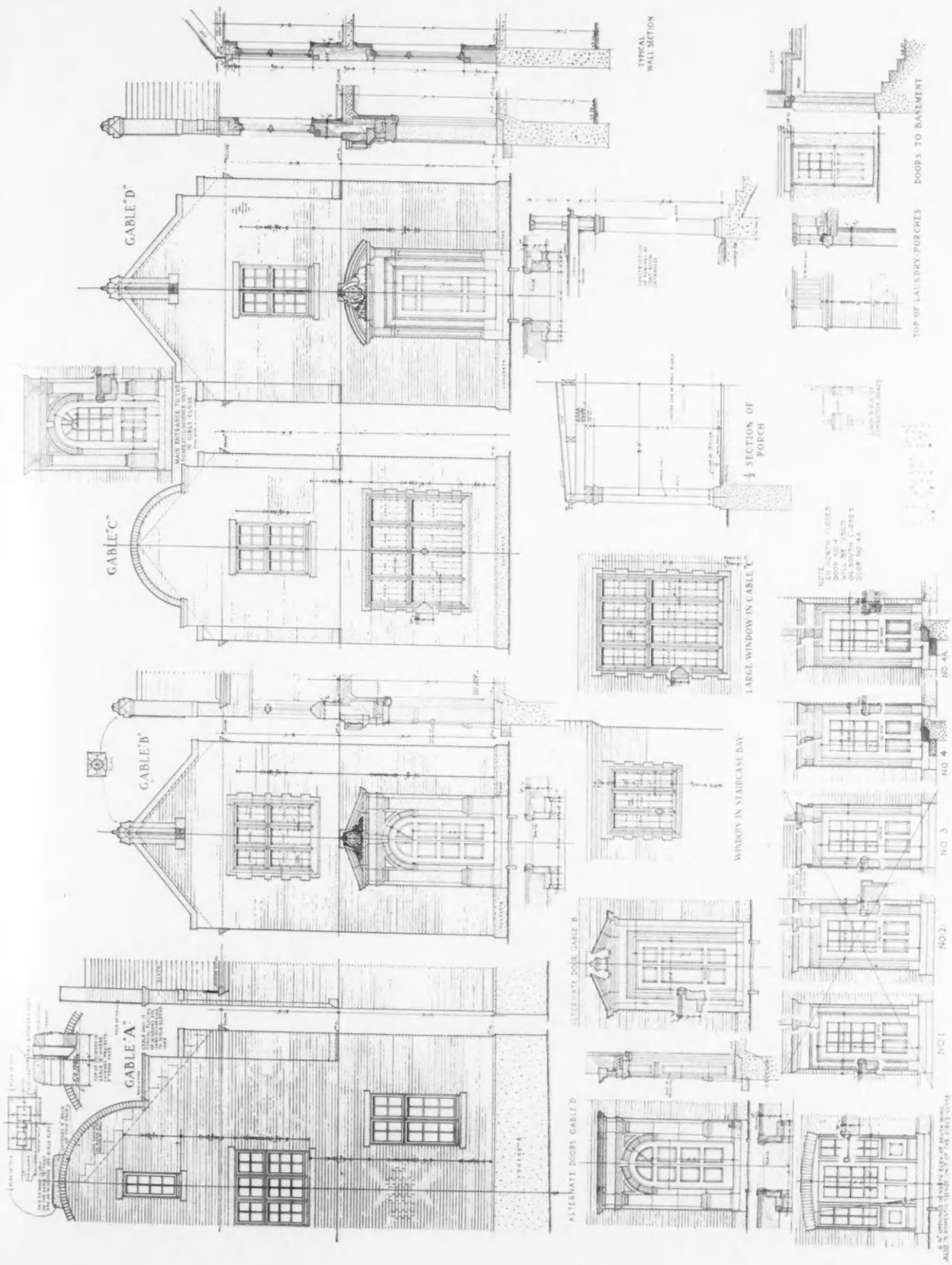
FIRST FLOOR PLAN, GIRLS' CLOSE



DETAIL OF COTTAGES, GIRLS' CLOSE

PERKINS INSTITUTION AND MASSACHUSETTS SCHOOL FOR THE BLIND, WATERTOWN, MASS.

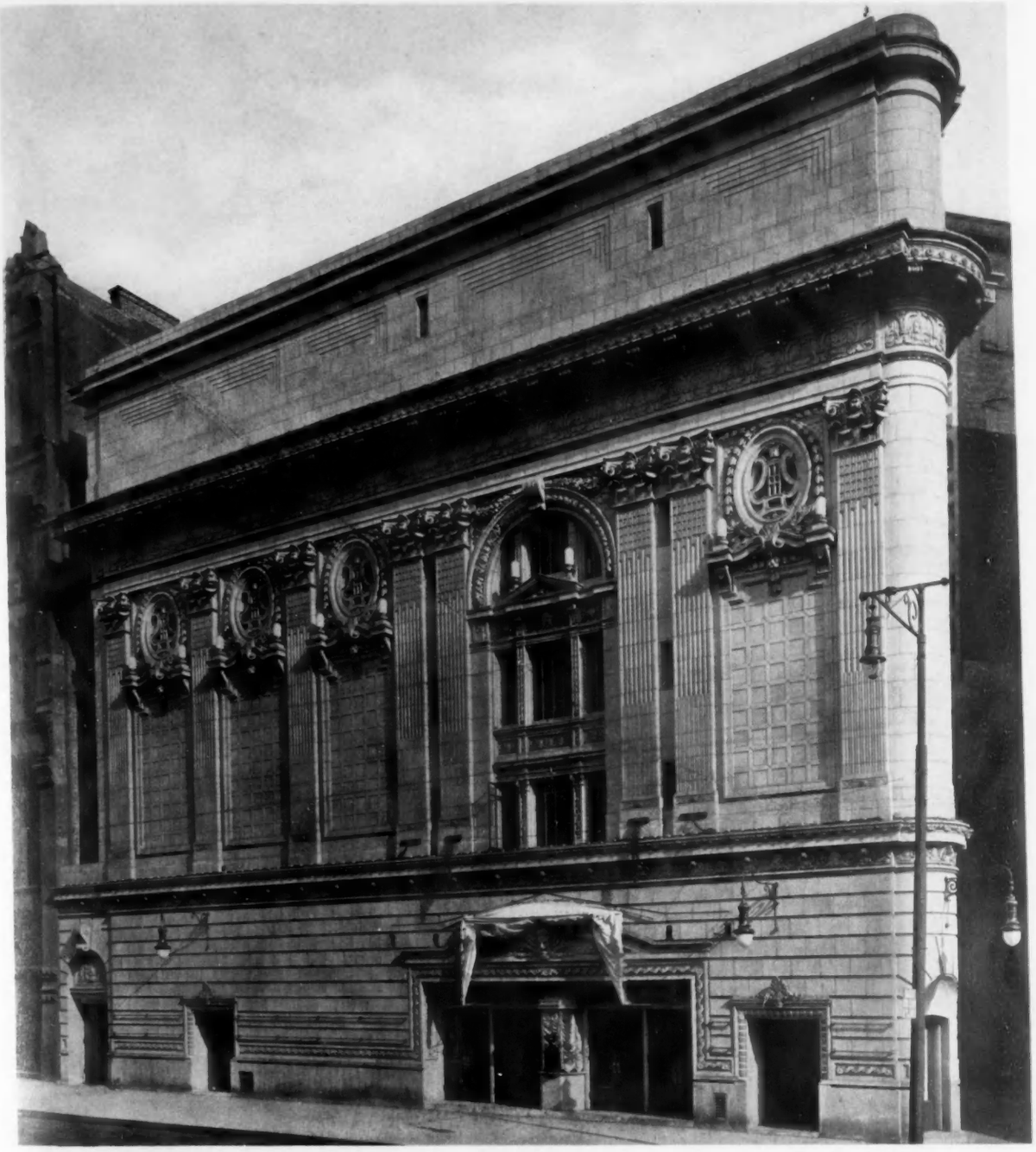
R. CLIPSTON STURGIS, ARCHITECT

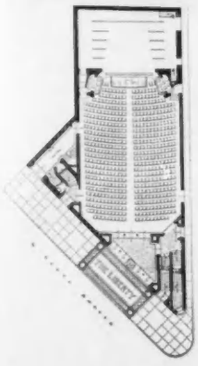


PERKINS INSTITUTION AND MASSACHUSETTS SCHOOL FOR THE BLIND, WATERTOWN, MASS.

BOYS' AND GIRLS' CLOSE—EXTERIOR DETAILS

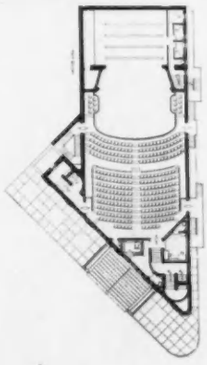
R. CLIPSTON STURGIS, ARCHITECT





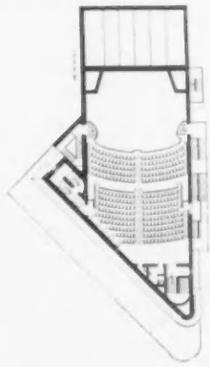
THE
LIBERTY
THEATRE

PITTSBURGH
PA.



EDWARD B. LEE

ARCHITECT



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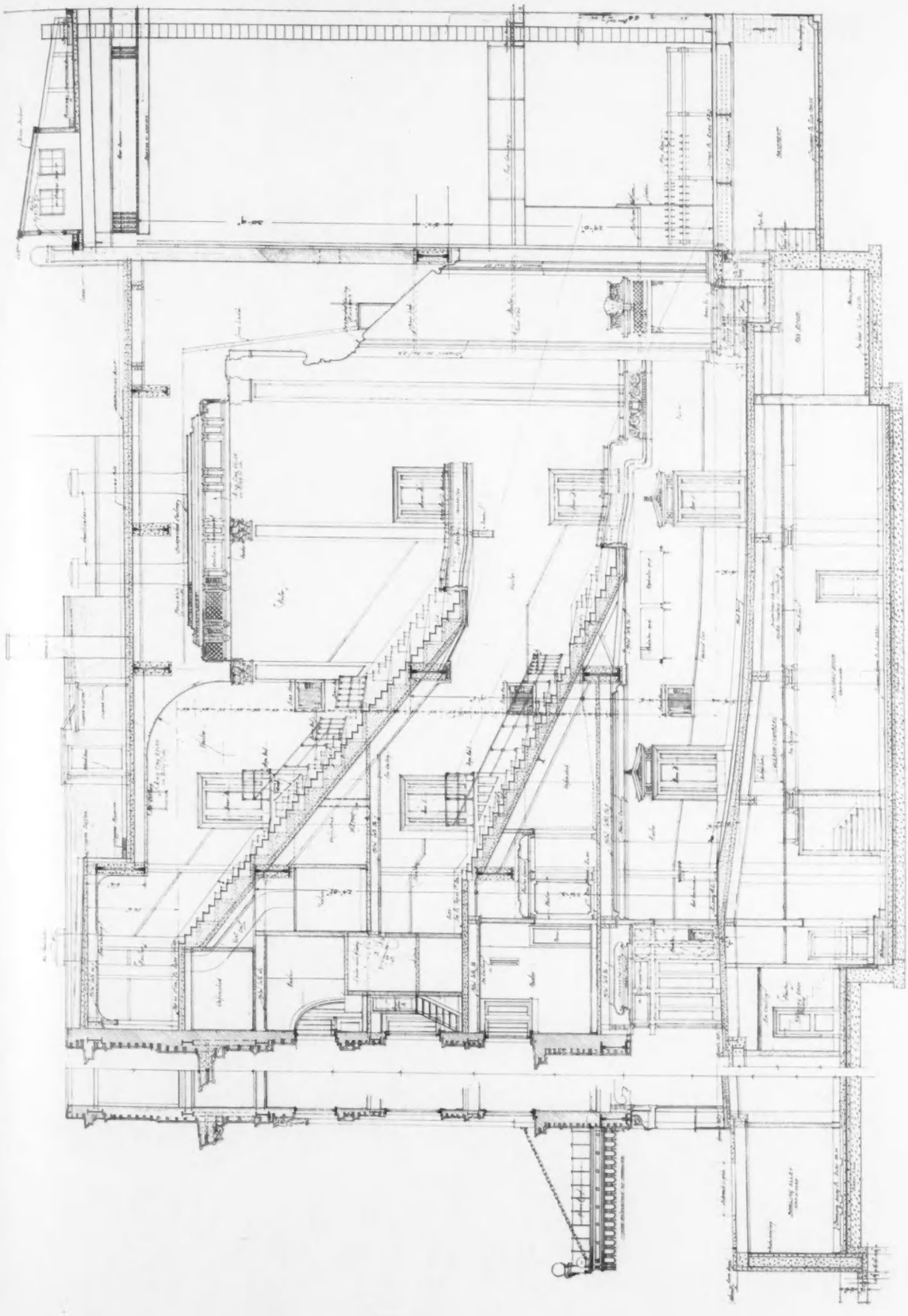
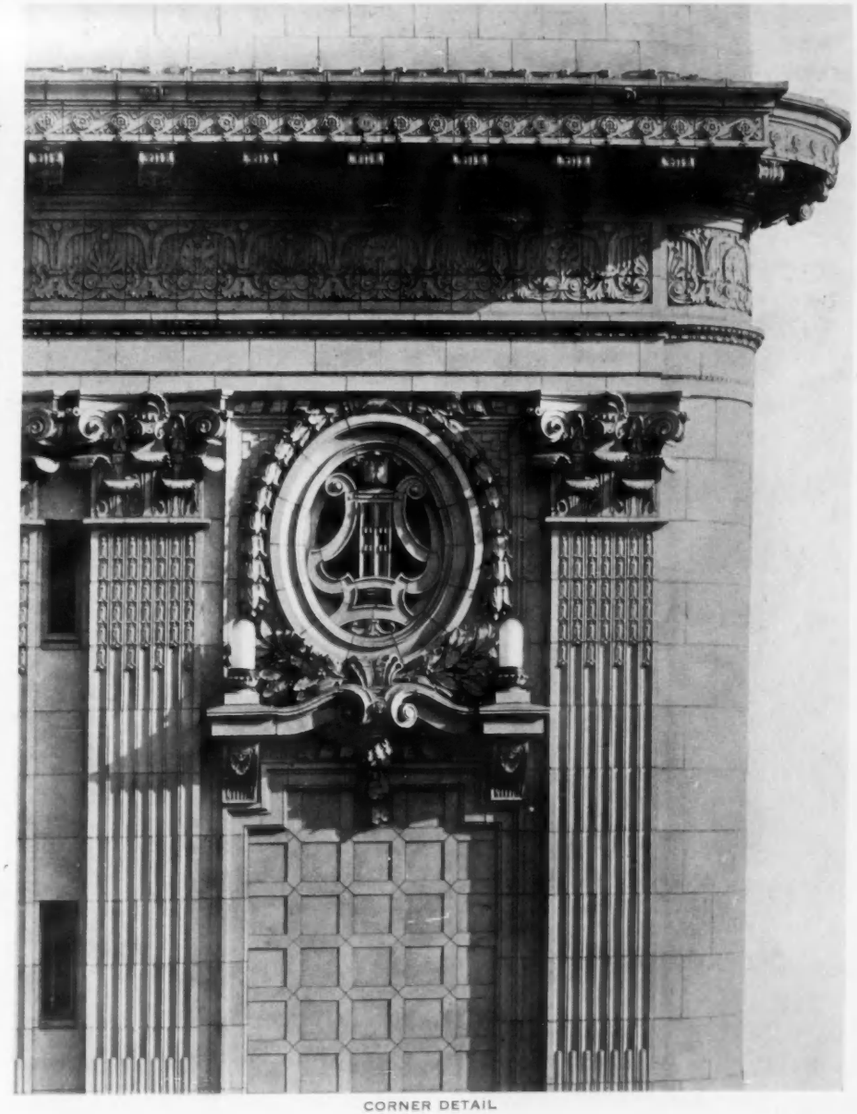


LONGITUDINAL SECTION

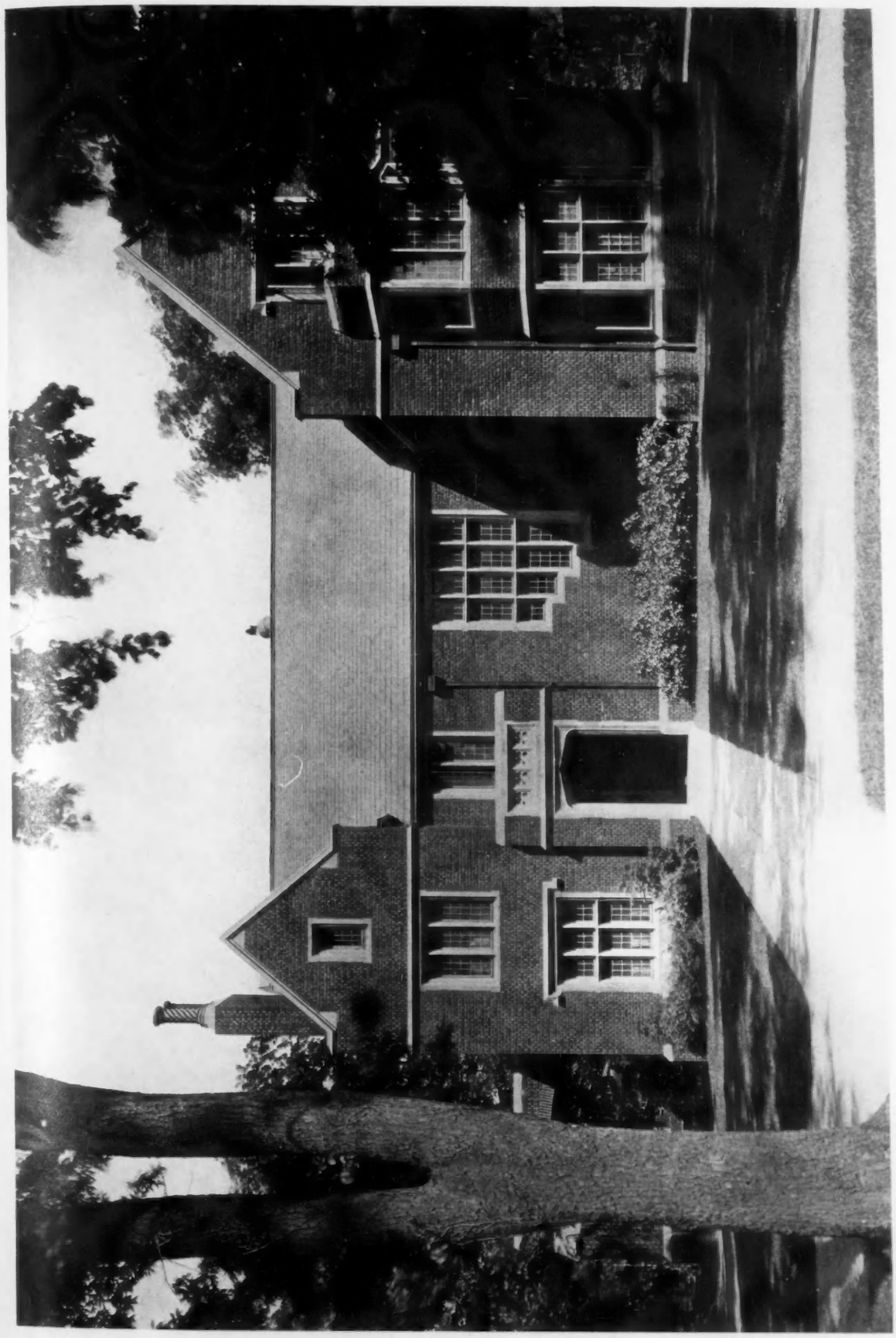
LIBERTY THEATRE BUILDING, PITTSBURGH, PA.
EDWARD B. LEE, ARCHITECT

DETAIL OVER ENTRANCE

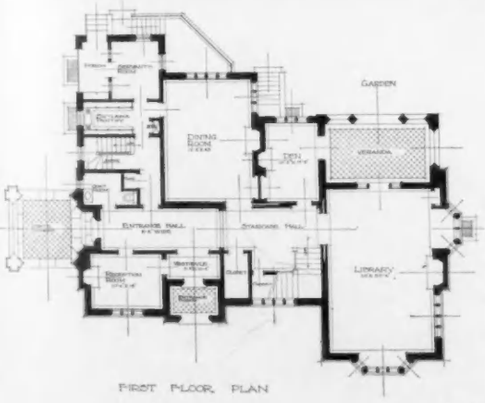


CORNER DETAIL

LIBERTY THEATRE BUILDING, PITTSBURGH, PA.
EDWARD B. LEE, ARCHITECT



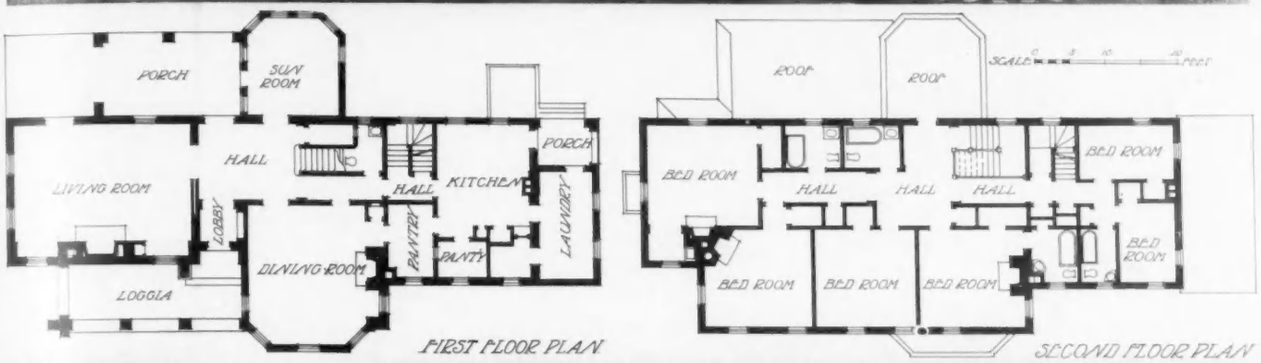
HOUSE AT NEW HAVEN, CONN.
MURPHY & DANA, ARCHITECTS



FIRST FLOOR PLAN

SECOND FLOOR PLAN

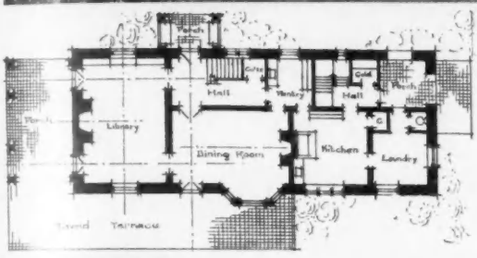
HOUSE AT NEW HAVEN, CONN.
MURPHY & DANA, ARCHITECTS



FIRST FLOOR PLAN

SECOND FLOOR PLAN

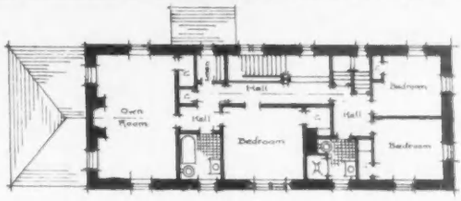
HOUSE AT CHESTNUT HILL, MASS.
F. MANTON WAKEFIELD, ARCHITECT



HOUSE AT
ST. MARTINS, PA.

(EXTERIOR WALLS OF TERRA COTTA HOLLOW TILE)

EDMUND B. GILCHRIST,
ARCHITECT



Second Floor Plan

Mrau

Practical Details in Hospital Planning and Equipment.

PART II. — GENERAL CONSIDERATIONS — *Continued.*

BY M. E. McCALMONT, R.N.

THE due and proper consideration of the staff is undoubtedly the architect's greatest difficulty and a little analysis of the situation may not come amiss.

It must be acknowledged at the start that doctors are not as a professional class good business men or executives; and very fortunately not, for if they were they would probably not be good doctors, and the world has a great need of them as such. The few and brilliant exceptions but prove the rule. Generally speaking, however, it is psychologically true that the practical temperament which impels a man to a business career is widely different from the temperament which impels a man to the medical profession. Their modus operandi is diametrically opposed. The business of the one is commercial, in brief, to "get"; the business of the other is more or less altruistic, in short, to "give." The success of the first depends upon method and system, the life of the other by its very nature precludes all system and regularity. We, therefore, very naturally find the majority of doctors unbusiness-like, impractical and with not a very keen sense of the utilitarian; that they are gullible and easily persuaded into a championship of impracticable propositions, finds ample testimony from the army of agents, promoters, etc., who single them out, in company with our worthy ministers, as their first and easiest victims!

This, however, is the architect's opportunity. They are easily persuaded. Let the architeet do the persuading. Usually he approaches the staff with the outward appearance, if not the inward spirit, of humility, and a modest assumption of ignorance on all the special problems of operating rooms and kindred departments. Let him change his procedure. Armed with real facts, let him approach the staff with an air of great knowledge and greater conviction, and when a surgeon wishes to have installed an antiquated sink because it is the kind he has always used, let the architect put before him the most modern thing with every argument pro and con, and such an array of authority that discussion would seem absurd. Recently the writer knew of an instance where a surgeon refused to have a table with a modern hydraulic base, because it was so constructed that he could not wind his leg around it while operating! In a western hospital built and equipped solely by doctors, in addition to exclusive furnishings of wicker (!) chairs, the beds in the private rooms had hand-painted roses on them! It is difficult to imagine such enormities, yet they are facts.

In another very beautiful hospital, the private room furnished by the medical staff contained the only *low* bed in the hospital, — an impossibility to work over.

These impractical tendencies are not so apt to creep into the actual hospital construction, but frequently are allowed to spoil the hospital planning. Undoubtedly the doctors must be consulted in regard to the special departments, operating room, laboratory, x-Ray, morgue, etc., but wise is the architect who enters the fray armed with facts.

With utility rooms and housekeeping departments, it is folly to consult the majority of physicians. Possibly nine-tenths of the workers of our hospital are women. It is the intelligent worker who should have the best knowledge of what is required for his or her work, to which may be answered, "Is not the surgeon the *worker* in the operating room?" Yes and no. His work is all *prepared* for him. It centers about one table. He has absolutely no idea of how many needless steps have been taken because of the inconvenient arrangement or planning. If his operations go smoothly, he thinks he has an ideal operating room and advises all his friends to build one just like it, without at all realizing that perhaps a difference of planning, a better arrangement of plumbing fixtures, etc., might lessen the working force in that department by one or more persons, as well as make the work less exhausting for all.

Practically every bit of work that is related to or is dependent upon the proper planning of a hospital is done by the women workers — yet that same planning is generally dominated by a group of impractical men. And so we find, as in a recent most costly and beautiful hospital containing hundreds of dollars worth of unnecessary fixtures, not a porter's closet in the entire building! Throughout the day the beautiful marble-lined bath rooms were disfigured by a motley array of brooms, pails, and mops — actually not a place to get them out of sight, much less economically care for them.

Dozens of other similar oversights could be enumerated, but the point is certainly sufficiently illustrated.

Location, Orientation, and Type.

It is an amazing fact that many of our most recent hospitals are built in the noisiest and dirtiest sections of the town or city.

It is natural for sick or wounded animals to go off to a shady and quiet place to recover. This is also the natural instinct of man. Yet with a horrible disregard for such natural tendencies, we build our hospitals in the noisiest possible sections, — street cars clanging past at all hours of the day and night; teams rattling over cobblestones; dust blowing in the windows; the noise of playing children in the street.

Surely one of the first duties of the architect, if he is truly interested in sane and humane hospital construction (and he should not have the temerity to plan a hospital if he is but commercially rather than humanly interested), should be to insist upon a reasonably suitable occasion.

Under no consideration should it be on a street where trolley cars pass. Special city or town ordinances should protect the patients from the noise of heavy drays, etc. The most noiseless form of pavement should be used in the street, cobblestones or similar noisy materials should be absolutely eliminated. The surrounding streets should be known and respected as "hospital streets."

The noise without is supplemented by noise within. To be sure, it is a matter of common agreement that a normal amount of noise is not undesirable. Whispering attendants, going about on tiptoe, would quickly produce an atmosphere as inimical to recovery as excessive noise. But the hospital is yet to be found where there is anything approaching a "deadly quiet." On the contrary, helpless and acutely sick patients are obliged to hear the distressing sounds of childbirth, delirium tremens, nausea from anesthetics, crying babies, etc., to a truly brutal degree. No architect is doing his duty unless he insists that at least the nursery, delivery room, isolation rooms, and a reasonable number of recovery rooms are made absolutely sound-proof. Also that elevators, dumb waiters, etc., should be enclosed in sound-proof shafts. But it seems absurd to make a plea for a few rooms only, when the entire hospital should be sound-proofed.

The architect who is the first to construct a modern hospital that is truly sound-proof deserves and will probably obtain a national reputation!

Were you ever acutely sick? If so, did you not want to be in a quiet and darkened room? What are we doing with the acutely sick in hospitals? We put them in wards flooded with sunlight and full of cases of all descriptions; frequent visitors; and all manner of noises within and without. It is only when we are convalescent that we want floods of sunshine and can feel tolerant of many people. Yet, in our present fad for orientation, we have almost forgotten that sunlight is most undesirable for many cases, and that quiet and a moderated light are at times essential factors in recovery.

So, too, have we rather blindly followed the European idea of scattering the various one, two, and three-story pavilions of the hospital all over the landscape.

The excessive cost and exhausting labor of administering such institutions has been entirely lost sight of. There are many more arguments against than for. Certainly we have a better view, better air, less dust and less noise as we build up. The most forcible argument against building up, rather than spreading out in the low pavilion style, is the danger in case of fire; but our modern construction, particularly in hospitals, is so nearly fireproof as to weigh lightly as an argument against the many advantages gained from higher buildings.

Ventilation and Lighting.

Both of these subjects are sufficiently important for special articles. Here they can only receive general comment, though special lighting fixtures for hospitals will be considered at length in a later article.

It is believed that the partial and, in many cases, the complete failure of the various ventilating systems tried out in our poor exploited hospitals are gradually but surely forcing architects and hospital workers to the conclusion that natural methods of ventilation are, after all, the safest and best. The writer has been in so many hospitals where these systems are found out of order, and has so frequently emerged with a racking headache and almost gasping for air from inspections of hospitals where such systems were supposed to be in working order, that with the utmost earnestness it is urged that the natural methods be not disregarded, even if an artificial ventilating system is contemplated.

In a recent visit to a new hospital occupied but a few months, the ventilation was noticeably bad, and inquiry made regarding it, to which one of the members of the building committee replied with evident chagrin that the electric fans operating the system made so much noise that the patients could not stand it!

In another and very large hospital where no expense had been spared for construction and equipment, a most elaborate ventilating system was installed, with "water-washed air" and many other wonderful "talking points." On minute questioning, however, even the engineer confessed that when the wind shifted in a certain direction the system failed utterly.

On the day of the writer's visit the air was so noticeably bad in one section of the hospital that inquiry was made as to why the windows were all closed; to which the nurse replied that all the windows were equipped with key-locks, the keys of which were carried by the Sisters (this was a Catholic institution) and that the windows could only be opened by going to the Sister for a key and obtaining permission to open the window. With such regulations it is easy to imagine how much really fresh air entered that hospital. Yet, in many other respects, it was most excellent and very modern.

As a matter of fact, to have windows equipped with lock and key is rather a good idea for hospitals, but it should be so arranged that the upper sash at least could be opened readily.

Lighting.

There is a no more neglected subject in hospital construction than the problem of lighting. The A. B. C. of the subject has scarcely been formulated. The nervous irritation, conscious or unconscious, which results from a well person being obliged to face directly for any length of time a glare of light, must become at least a subconscious agony in the case of sick persons. Yet for years we have placed glaring ceiling lights in our hospital wards, unshaded center and wall lights in the private rooms, sublimely unconscious or cruelly indifferent to the acute discomfort of and pernicious effect upon the patient.

The comparatively new system of indirect lighting is a cause for thankfulness in many quarters; certainly it is an unmitigated blessing to the hospital patient. Various details and description of fixtures thus far worked out as a partial solution of this vital problem will be discussed in a later article.

Planning and Equipment.

As we have stated previously in this article, the problem of organization, management, and equipment are too closely related to the planning and construction to be disassociated.

We have talked, read, discussed, and *practised* rounded corners and angles, flush surfaces and absence of unnecessary projections until we now feel that it is almost a personal affront to mention the subject. The most poorly planned hospital of recent construction can brag of these features which were radical ten years ago, while the most ignorant architect, to-day, would scarcely dare install paneled walls or doors. And yet, though years of time and effort have been spent in arriving at this stage of education, we to-day see hospitals where thousands of

dollars have been spent in obtaining smooth surfaces and other sanitary features of construction, equipped with *wicker* furniture! Was there ever a more absurd inconsistency! To virtually concentrate all the projections, crevices, and dust-catching surfaces which have been eliminated at such great cost and effort from the construction and then assemble and install them in a few diabolical articles of equipment! Certainly here is a field for education, and it is to be hoped that the architects will feel their responsibility, at least to the extent of giving good advice.

It behooves them so to do, for, justly or unjustly, the public gets its impression of the hospital from the equipment and furnishings rather than from the details of planning, and the architect is judged from the ensemble. If, therefore, he can be sufficiently informed on this subject to give good advice in the matter, it will reflect a glory upon him that will be worth while.

Wicker or reed furniture has absolutely no place in a hospital, particularly in waiting rooms, and emphatically not in private rooms. It *cannot* possibly (and certainly *will* not in the usual busy institution) be kept sufficiently clean and aseptic to be anything less than a menace.

The public cannot be expected to know of the possible dangers encountered from such a source, but every hospital worker, doctor, and surgeon should know if they but give it thought; yet, if protest has ever been made on this subject, we have not thus far heard it.

There is a great hue and cry about our hospitals "looking like hospitals." What should they look like, pray? A real hospital is a true haven of refuge in time of sickness and distress. There should be no truer compliment than to have it look like a hospital.

But certain misguided members of furnishing committees, etc., have interpreted a clean white room as being more intimately associated with distress than with sanitation and have, therefore, insisted upon mahogany, brass beds, oriental rugs, impossible screens, silk-covered quilts, and other accessories supposed to be "home-like," as the proper private room furnishings. To maintain their inconsistency, however, they omit a pair of washable curtains and a cheerful box of flowers, which are legitimate features and essentially "home-like."

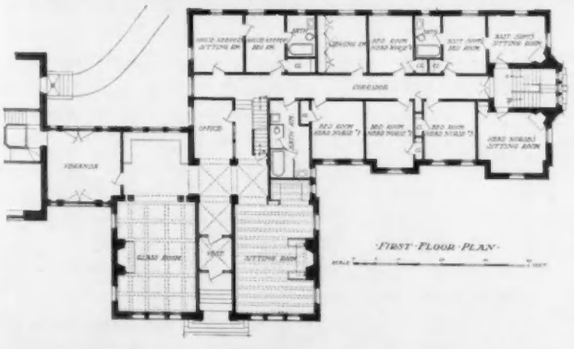
White is the color of cleanliness, and clean white furniture which will stand daily soap and water, or antiseptics, if necessary, is without doubt the ideal furnishing.

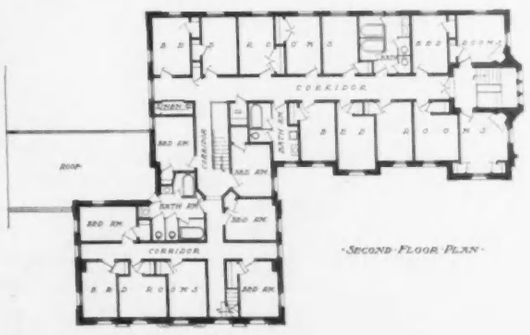
Let the architect put a little intelligent thought on this question, for his opportunity to educate is too great and valuable to be neglected.

NURSES' DORMITORY
FOR THE
FREE HOSPITAL FOR
WOMEN.

BROOKLINE, MASS.

COOLIDGE & CARLSON
ARCHITECTS



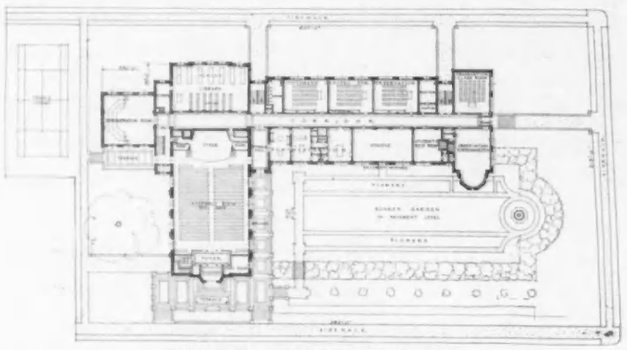


The Normal School, Newark, N. J.

E. F. Guilbert, Architect.

THE city of Newark, which is already fortunate in having many fine school buildings, has in the recently completed Normal School added to this group one more, which is as fine an expression of academic architecture as can be found among the public schools of any city in the East. It is not usual for many cities to maintain normal schools, and consequently there are but few examples of municipal school buildings of this kind which provide a standard for judging. But in any case this building must be acknowledged a step toward idealism in city school architecture.

The plan of the building was adopted after a careful study of the character of the land and the surrounding streets. Bellville avenue on which the school fronts is a noisy thoroughfare, while parallel with it is Broad street, which is on the other hand extremely quiet. Hence the main school rooms were set back close to this street, and the sunken garden feature, which the contour of the land suggested, was incorporated to separate them from the former thoroughfare. The assembly hall, which is used less frequently, was however placed in a wing running out to Bellville avenue with a direct entrance from the street. The result of this solution of the problem has given an unusually diversified and pleasing contour to the building. It has also provided wonderfully well lighted rooms throughout the structure, as there are no interior courts necessary, and the principal class rooms, arranged on either side of a central corridor in the south wing, overlook either the street or the garden.



FIRST FLOOR AND PLOT PLAN.

The selection of the Jacobean style for the exterior design is entirely satisfying and most appropriate for expressing the function of the building. This style through its association with the older educational institutions of England, as Oxford and Christ Colleges, has come to be looked upon as being the most satisfactory treatment for a building of this character. The style has many claims to its universal popularity other than its charm and long association with letters, and many of these tend to severe practicality. It permits of a generous amount of window space which is always necessary to light recitation and study rooms.

Adequate lighting of class rooms becomes a severe tax on the designer, who hopes to achieve a façade that will exhibit all the accepted earmarks of good architecture, and at the same time provide a building which will fully meet the practical requirements imposed on it by its use.

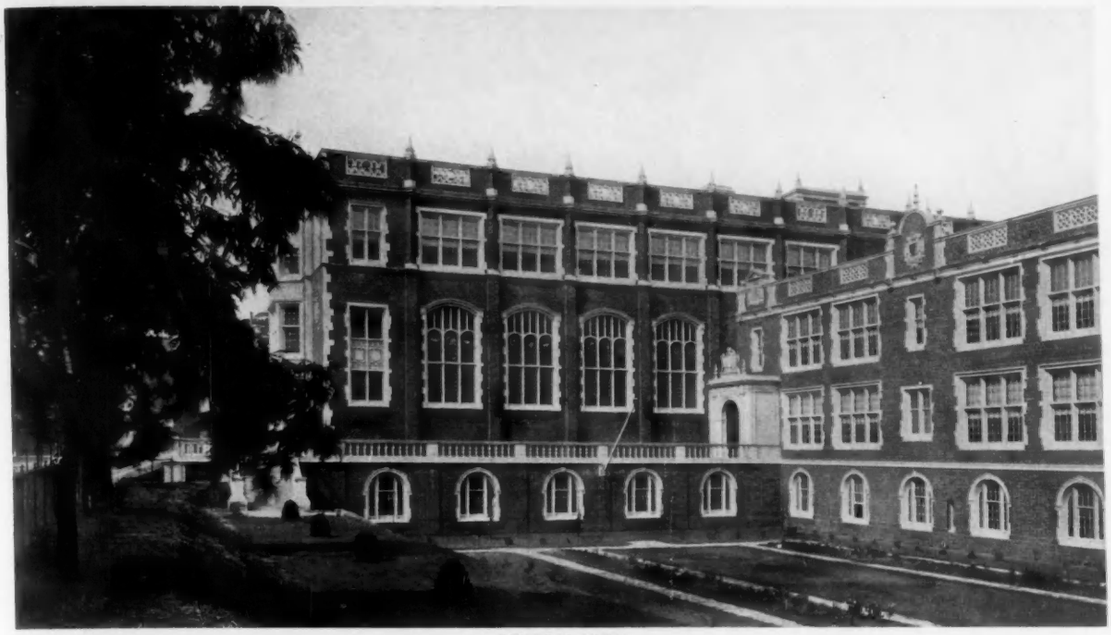
This difficult feat has been quite successfully accomplished in this case by grouping the windows in bays and reducing the supporting piers to a minimum. The weak effect which this would naturally create has been counteracted by projecting the piers out in the manner of buttresses and carrying them the entire height of the building, breaking the cornice and stringcourses around each and bringing them to a termination in a terra cotta finial above the roof balustrade. An effect of solidity is further gained by the use of heavy terra cotta mullions in all the windows which tie in well with the lintels and window trim, as well as the cornices and stringcourses which are likewise of terra cotta. The windows are further divided into small panes by white glazing bars with excellent effect and without reducing the light as the openings have been increased to allow for this. The larger windows in the assembly hall are divided by moulded terra cotta tracery and filled with leaded glass with a medallion in each section.

The building is an example of a happy combination of burnt clay products,—brick and terra cotta. The body is constructed of a rough-textured brick, varying in tone from a brilliant red to a blue black, laid up with wide flush joints in white mortar. This gives a rich texture.

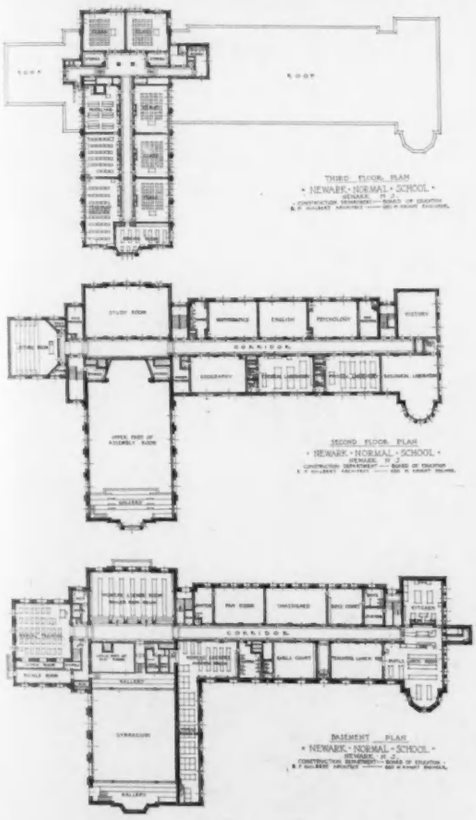
In particular the building is an expression of a pleasing and appropriate use of architectural terra cotta for the decorative features and ornamental trim. The terra cotta is of a light gray color throughout, finished in a dull mat glaze, which harmonizes beautifully with the vari-colored brick.

The success in handling a composition in the style employed on this building is dependent, to a great extent, upon a judicious use of ornament and detail. In this instance the decoration has been wisely confined to a few distinctive features which stand out boldly in contrast to the plainer surfaces of the main walls. The fine decorative effect of these features, principally the entrance and bay of the assembly hall wing, the entrance from the terrace above the garden and the bay on the southwest, is due to the general excellence of the modeling and the suitability of the design for execution in terra cotta.

The architect in working in architectural terra cotta should understand its limitations and realize the wonderful possibilities in the material. Terra cotta is first of all a plastic material and lends itself readily to any form into which it can be moulded; but this, however, does not mean that every piece of carving or fine detail which is possible in marble can be as easily obtained in terra cotta. From the very nature of the material and its process of manufacture, the modeling must be strong and assertive. In firing the clay in the kiln, there is a certain amount of shrinkage and the detail must not be so fine that in this process it will lose any of its character, although it is not impossible to obtain effects which are justifiable in terra cotta and still lack none of the charm of marble, and which have an individual nature that terra cotta alone can give.



GENERAL VIEW

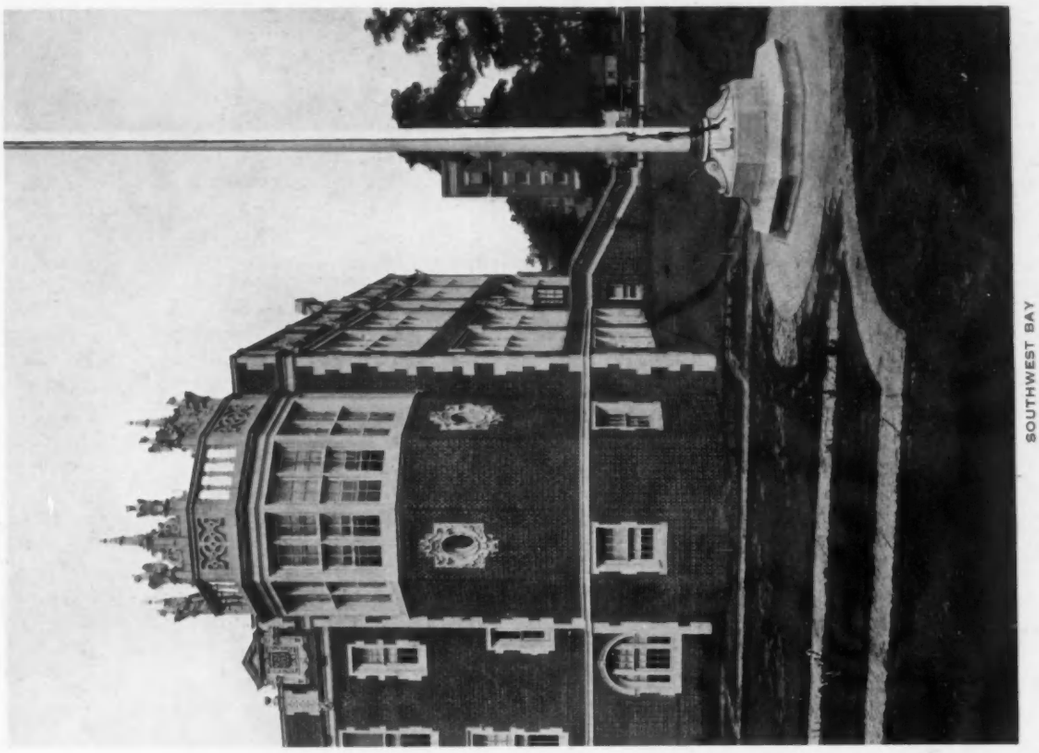


FLOOR PLANS

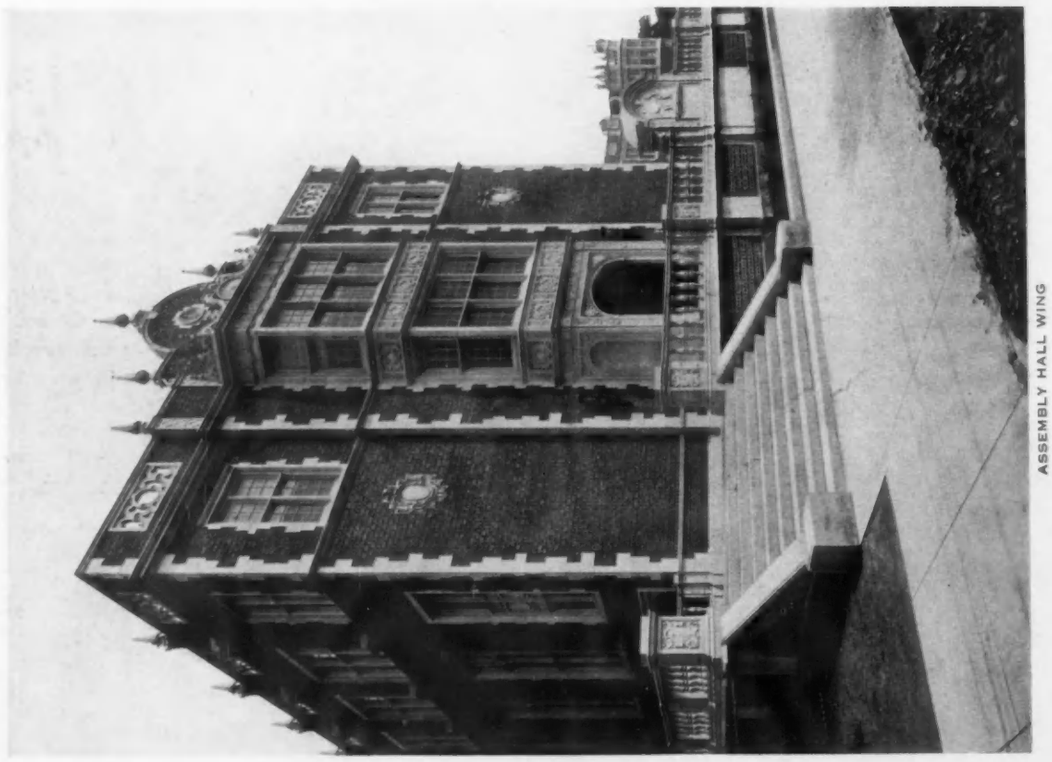
ENTRANCE DETAIL

NORMAL SCHOOL, NEWARK, N. J.

E F GUILBERT, ARCHITECT.



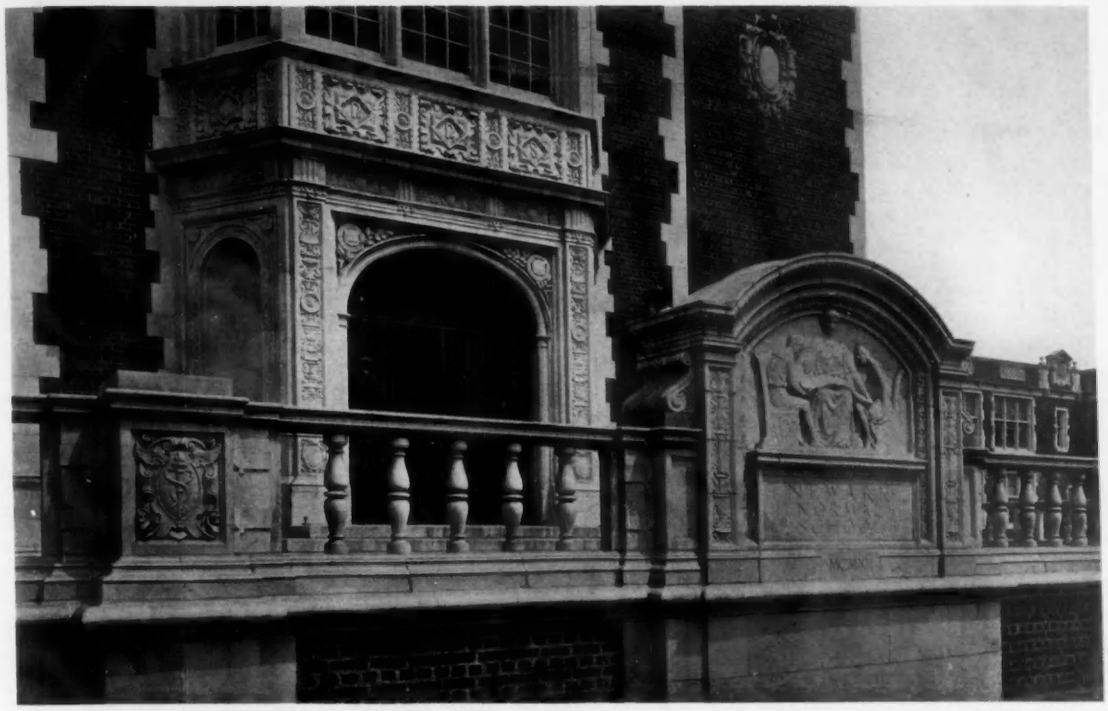
SOUTHWEST BAY



ASSEMBLY HALL WING

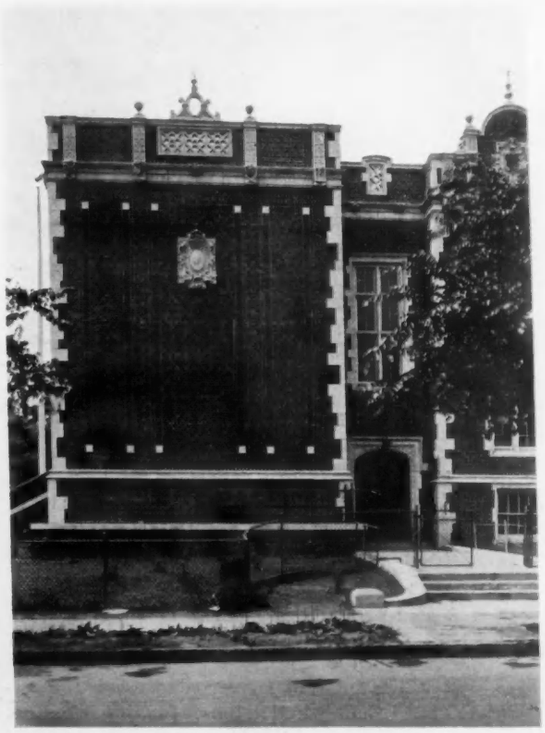
NORMAL SCHOOL, NEWARK, N. J.

E. F. GUILBERT, ARCHITECT



DETAIL OF ENTRANCE AND TABLET

TERRACE DETAIL



REAR DETAIL

NORMAL SCHOOL, NEWARK, N. J.

E. F. GUILBERT, ARCHITECT

Architectural Jurisprudence — Part III.

THE ARCHITECT'S EXTRA WORK.

BY WILLIAM L. BOWMAN, C.E., LL.B., OF THE NEW YORK BAR.

IN our consideration of this subject we shall use the term "extra work" in its generally accepted meaning or as signifying any service beyond the contract work. Naturally that at once raises the question, What is the contract work? The answer should be easily determined by a written contract expressing clearly and definitely just what the architect is to do for the compensation promised. And again we are warned of the importance to the architect of having the terms of his employment in writing. What chance has an architect to recover for extra work when it becomes merely a question of veracity between him and his employer? How easy it is for the employer to believe and swear that the conversation at the time of the employment was to the effect that the architect was to do everything connected with the planning and erecting of his building for a certain percentage or a fixed lump sum. Since the percentage chargeable is somewhat limited by custom and by the schedules of the various architectural organizations, there are sure to be times when the architect has to take the employment at the usual and customary rates, although he may know that there are troubles before him in his performance. Then it becomes important for the architect to know what has been legally considered "extra work."

What Is Extra Work? The usual employment of an architect involving the preparation of sketches, working drawings, specifications and details, and the superintendence may largely be determined by custom where there is no definite agreement or where the schedule of the American Institute is not made a part of the employment contract. While many jurisdictions will not permit a custom to be binding upon an employer, especially where he has no personal knowledge of such custom, yet on the other hand it would be hard to imply that an architect would be bound to do work outside of the usual and customary work in the absence of anything in his contract requiring him to do such work. For example, in England where the schedule of charges sanctioned by the Royal Institute of British Architects states that the usual remuneration by way of five per cent commission on the total cost of the works is "exclusive of measuring and making out extras and omissions," it has been determined that in the absence of a contract so to do the architect could not be expected to consider measuring and the making out of extras and omissions within his employment contract. It would therefore be proper for the English architect to charge reasonable extra remuneration for such work.

It might be interesting to note here a fact greatly to the credit of the American architect, that although there are doubtless thousands of instances where the architect has done extra work, the reported legal controversies respecting such work can be numbered in tens. In those instances the most common defense of an owner is that he supposed the extra work to be part of the employment contract. Hence, notice to him of the fact that what he is ordering is extra work, for which an additional remuneration will have to be paid, will often deter him from making the change. As a matter of law such notice is not necessary in many States. Probably the usual rule of law is best stated, that where an architect is ordered by the employer to do work in some way connected with the original contract of employment, but substantially independent of it, under such circumstances that the employer should know that it would cause extra trouble or expense to the architect not within his employment contract, such architect has a good demand for reasonable compensation if the original contract does not otherwise provide. To be specific, in a case of superintendence for a fixed sum, it has been decided that if the owner during the work makes changes which require a longer time to complete the building, and the architect does the extra superintendence with the owner's knowledge, such architect could recover extra compensation therefor. This same case also held that no notice need be given by the architect that he expected extra compensation for his additional services.

Changes and New Contract Drawings. When the architect presents his first sketches it is to be expected that there will be many changes desired by the employer; the entire scheme may be disapproved. The question as to how many schemes or sketches he must prepare and submit depends largely upon the character and importance of the work, the practice or custom of local architects or of himself. Ordinarily there will be little or no expectation of extra work at that stage of the employment.

After the sketches are approved and the first scale drawings completed, the architect still expects many minor changes which are made as a matter of course. If at any time thereafter the design is wholly changed or a three-story building instead of a two requested, or a fifty-foot frontage instead of a twenty-five foot, then such request or demand is under ordinary conditions considered an entirely new contract. The architect is then entitled to the reasonable value of the work done before the scheme was changed, which would ordinarily be the contract price of the work done, and also the entire percentage of the original contract as the reasonable value of the new employment. Some difficulty is often found in deciding under certain circumstances whether the changes demanded or requested create a new contract or are merely extra work. This is especially true where the change is a reduction in size without any material change in design. However, since the compensation in either case is the reasonable value of the work done, it does not make much practical difference to the architect what it is called until it becomes a matter of pleading and proof in a court of law. In cases such as have been just suggested, it seems that it has been the custom of some architects to charge the full fee or percentage on the most expensive building, and the cost with a good percentage for profit on the other work done.

If this question of extra work has to be fought out in court, the burden of proving that any work is extra is upon the architect. The defenses that are sometimes held good in cases of this nature against municipalities are extreme.

For example, in a contract which was properly entered into by a city commissioner, there was a clause requiring the architect to be subject to the orders and directions of the commissioner or his engineer, and that if any orders or directions be given the architect and they were not carried out, then the city should have the power to terminate the contract by written notice. There was also a contract clause specifying that all changes or modifications of the drawings, etc., must be in writing. After the architect had completed his working drawings and specifications ready for bidding purposes, but before bids were received, the commissioner, upon the advice of his engineer, decided to make some very radical changes both in the design of the steel construction and in the inside finish. This decision was given to the architect in a conference and he made new working drawings and new specifications to cover these changes. At the trial there was no serious question but what the architect had done this extra work and that he was entitled to pay for it, but the trial justice in charging the jury stated that since the contract required all changes, etc., to be ordered in writing, which was neglected in this instance, there could be no recovery by the architect. This instruction to the jury was given also in face of the fact that the commissioner had the power to enter into contracts orally with any architect, and there was no question but what he had an appropriation to pay for this extra work. As there was a partial recovery on another part of the case, no appeal was ever taken, so it cannot be stated what the appellate court would have done. However, this is an example of the protection afforded municipal corporations when they are sued, and there is no question in my mind but what the result would have been different had the defendant been any one else.

Changes in the working drawings or details made during the progress of the work may or may not be extra work, depending largely upon the circumstances. It has been a custom for most architects to do a certain amount of such changing work without making extra charges, although they know they are entitled to an additional fee based upon the cost of the labor involved in such changes. What might be considered the leading case on this matter involved the following facts: An owner contemplated changes in a building at a cost of $5,400. After some conversations the architects offered to do the work for a flat sum of $500. The work had progressed and, in connection with other improvements and changes, cost $50,000. The architects sent in their bill based on ten per cent of the total cost, and the owner refused to pay, claiming the fee was $500, and that there was no contract or agreement for any other work or compensation. The decision was that the owner must pay the architects' bill as rendered and proven at the trial. The grounds of the decision were that the owner had let the architects go ahead with the work, that he had practically agreed to a ten per cent commission for the work originally contemplated and ordered, and there was expert testimony that such percentage was the reasonable value of the work. In another case, where extra plans were required and the architect was allowed to recover for such extra work, it was suggested, in stating the fact that the recovery should be the reasonable value, that the architect must not make the cost more than necessary.

Other Extra Work. The reported cases show that an architect has been allowed extra compensation for such services as making up a lumber bill, settling accounts between employees on the work, acting as an arbitrator, qualifying as a witness, attending in court as a witness or expert, etc. On the other hand, in one case it was held that time used consulting an expert during the preparation of insulation plans, and also that time used in the actual preparation of such plans, was not extra; also that where the architect's brother was put on the job as superintendent or clerk of the works, there could be no extra recovery for his services; that these were all part of the contract work and were paid for in the percentage payments. Just lately I saw an architect's opinion on this question of extra work wherein he stated that all necessary traveling expenses were usually billed against the owner, and that in all out-of-town work the architect was entitled to extra remuneration for the extra time involved in the superintendence of the work by reason of its distant location. These suggestions do not seem to be sustained by any legal decisions and do not seem to be sound, unless made a matter of contract right. This same opinion also claimed that under the usual statement that all drawings and specifications should remain the property of the architect, an owner should pay for a set of plans if he wanted them. That does not seem a safe suggestion in view of the present law on the subject, which holds that as between the employer and the architect the plans and specifications belong to the owner, unless there is something in their contract to the contrary. In a late case, upon a question of this sort, it was held that an owner could be permitted to prove a general custom of the architect to furnish copies of plans and specifications for use by bidding contractors. It is therefore not advisable for an architect to refuse an owner a set of plans and specifications unless he will pay extra for them.

Recommendations. It is important to remember that there are many ways in which an architect may waive his rights in this matter of extra work and preclude his recovery of payment for it. The employment contract may specify that the architect shall do any and all architectural work required or demanded by the employer in connection with a specified piece of property; it may require work to the satisfaction of the employer in jurisdictions where honest dissatisfaction precludes recovery; it may require extra work to be subject to conditions of written order, of fixed cost, etc., or it may even provide that no extra work will be paid for unless there is a new contract entered into therefor.

In the matter of payment, the architect should know and remember that if he accepts a certain sum in full for his services, or a check which shows on its face or back or by the accompanying letter that it is meant and sent as full compensation to date, or if he signs a release or other paper to the same effect, — all such actions may be disastrous to any later attempt to recover for extra work.

Our considerations then give us the following summary of recommendations: First — have a definite written contract and if possible have the institute or a local society schedule made part of the contract or at least make such document a matter of notice to the employer; second — comply with the contract conditions regarding extra work or, if there are none, then give notice to the employer of such extra work when ordered, with an approximate estimate of the cost; and third — in accepting payment on the contract do not blindly accept contract payments and sign away your rights to compensation for your extra work.

EDITORIAL COMMENT AND NOTES FOR THE MONTH

MR. WARREN PERRY, instructor in Architecture, University of California, in an address upon the "Teaching of Architecture on the Pacific Coast," says: "First — a purely selfish observation — he who teaches learns ten times as much as does he who is taught; therefore, let us one and all start 'ateliers.' I think that this is more true of architecture than of almost any other subject, for it invites to a sublime degree not only a study of the 'Five Orders according to Vignola' — God forbid! — but of humanity — of as many individualists as one has disciples — each one a living bundle of enthusiastic tendencies, good, bad, and indifferent.

"If architecture be not the study of humanity, whatever is it? It means the being prepared (for a stated period each day, in my case) to face a thousand searching questions on the history, theory, and practice of this vast subject, which are being constantly concocted by an interactive group of unfettered and exceedingly restless imaginations. Happy is he who has left a row of conveniently disposed loopholes along the pedagogic path, through which he may slip, on occasion, with small loss of dignity; and, I may add, thorny is the way of him who has been wont to say with firmness, 'Never do this!' 'Always do that!' for he will be tripped headlong over his own foolish phrases, again and again. Also this: A class may forget the name of the architect of the Parthenon, or the principles of Gothic construction, but never will it fail to call to mind a famous building which flaunts itself in the face of one of your 'dont's' or 'always's,' however obscure that one may have been."

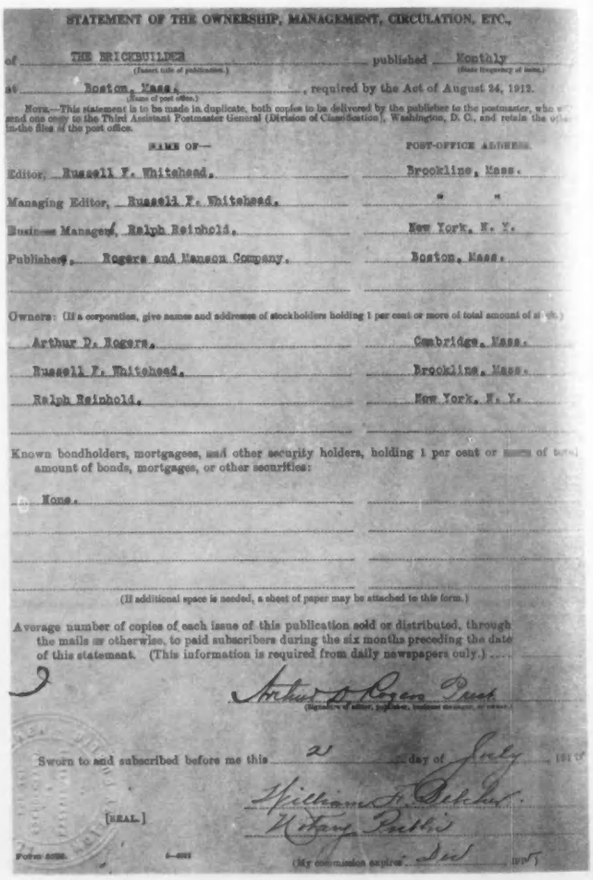
THE form of agreement with clients used by Mr. R. Clipston Sturgis and suggested to our readers in the May issue of THE BRICKBUILDER has inspired one of our readers to suggest two points which seem to him incompatible with the form of agreement. We print these with the hope that others will be prompted to discuss this important phase of architectural practice.

The first is that most architects like to do considerable drafting themselves, and some of the practical ones write their own specifications, and unless such an architect places himself upon a salary the cost of the work is not properly computed; and if the architect does draw a draftsman's salary for such services, how can this be explained to the client in the form of agreement suggested by Mr. Sturgis.

In regard to valuing office space in proportion to the time of the draftsman, rather than as to the cost of their services, it is our experience that the least lighted portions of the office are usually assigned to the cheaper men, and that in order to proportion the administrative expense to the time, rather than to the salary, would necessitate valuation of the floor space according to its proximity to the light, etc. Expert accountants inform us that mainly for this reason the proportion is usually made according to the cost of the salary rather than to the time.

ARTISTIC works are not a luxury, they are necessary for the satisfaction of human requirements for culture and enlightenment. Yet all paintings in oil or water colors, pastels, and sculpture that have been produced within the last twenty years are subject to a tariff tax. We know of no American artists who wish to be "protected" from the free interchange of art works between this country and Europe. Section 654 of the Underwood bill, as the House passed it, cuts off the absurd duty. The members of the Senate committee would restore it, and would extend its scope to works produced in the last fifty years. We hope there are no other Senators narrow-minded enough to wish its restoration.

Why a tariff on paintings and sculpture? If there is a great living church of art, this tariff wall serves only to obstruct the view of its services. Let it be utterly removed.



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Sworn to and subscribed before me this 21 day of July 1913

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